

APPLICATION FOR TEMPORARY CHANGE OF WATER

DIVISION OF WATER RIGHTS Rec. by KF
Fee Paid \$ 75.00

STATE OF UTAH

APR 7 2004 Receipt # 04-01540

RICHFIELD AREA

Microfilmed

Roll #

ck # 2516

For the purpose of obtaining permission to make a temporary change of water in the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of Section 73-3-3 Utah Code Annotated 1953, as amended.

*WATER RIGHT NO. 63 2529 *APPLICATION NO. 1 28851

Changes are proposed in (check those applicable)

☒ point of diversion. ☒ place of use. ☒ nature of use. ☒ period of use.

1. OWNER INFORMATION

Name: Kings Meadow Ranches - Evan Dastrup *Interest: %

Address: P.O. Box 116

City: Sigurd State: Utah Zip Code: 84657

2. *PRIORITY OF CHANGE: 4/7/04 *FILING DATE: 4/7/04

3. RIGHT EVIDENCED BY: A Portion 63-2529

Prior Approved Temporary Change Applications for this right:

***** HERETOFORE *****

4. QUANTITY OF WATER: cfs and/or 14 ac-ft.

5. SOURCE: Kings Meadow Creek

6. COUNTY: Sevier

7. POINT(S) OF DIVERSION: S 1,011', E 1,711' from NW corner of
Section 28, T23S, R1W

Description of Diverting Works: Kings Meadow Creek

8. POINT(S) OF REDIVERSION

The water has been rediverted from at a point:

Description of Diverting Works:

9. POINT(S) OF RETURN

The amount of water consumed is cfs or ac-ft.

The amount of water returned is cfs or ac-ft.

The water has been returned to the natural stream/source at a point(s):

*These items are to be completed by the Division of Water Rights.

Temporary Change

10. NATURE AND PERIOD OF USE:

Irrigation: From 04/01 to 10/31
Stockwatering: From 01/01 to 12/31
Domestic: From 01/01 to 12/31
Municipal: From _____ to _____
Mining: From _____ to _____
Power: From _____ to _____
Other: From _____ to _____

11. PURPOSE AND EXTENT OF USE

Irrigation: 4.667 acres. Sole supply of _____ acres.
Stockwatering (number and kind): _____
Domestic: _____ Families and/or _____ Persons.
Municipal (name): _____
Mining: _____ Mining District in the _____ Mine.
Ores mined: _____
Power: Plant name: _____ Type: _____ Capacity: _____
Other (describe): _____

12. PLACE OF USE

Legal description of place of use by 40 acre tract(s): Section 20, T23S, R1W, SE/4, SLBM

13. STORAGE

Reservoir Name: _____ Storage Period: from _____ to _____
Capacity: _____ ac-ft. Inundated Area: _____ acres.
Height of dam: _____ feet.
Legal description of inundated area by 40 tract(s): _____

***** THE FOLLOWING CHANGES ARE PROPOSED *****

14. QUANTITY OF WATER: _____ cfs and/or 14 ac-ft.

15. SOURCE: Kings Meadow Creek

Balance of the water will be abandoned: _____, or will be used as heretofore: _____.

16. COUNTY: Sevier

17. POINT(S) OF DIVERSION: S 869', W 1,901' from SW corner of Section 17,
T23S, R1W, SLBM

Description of Diverting Works: _____
*COMMON DESCRIPTION: _____

18. POINT(S) OF REDIVERSION

The water will be rediverted from _____ at a point: _____

Description of Diverting Works: _____

19. POINT(S) OF RETURN

The amount of water to be consumed is _____ cfs or _____ ac-ft.

The amount of water to be returned is _____ cfs or _____ ac-ft.

The water will be returned to the natural stream/source at a point(s): _____

20. NATURE AND PERIOD OF USE

Irrigation: From ___/___/___ to ___/___/___
 Stockwatering: From ___/___/___ to ___/___/___
 Domestic: From ___/___/___ to ___/___/___
 Municipal: From ___/___/___ to ___/___/___
 Mining: From ___/___/___ to ___/___/___
 Power: From ___/___/___ to ___/___/___
 Other: From 05/30/04 to 05/30/05

21. PURPOSE AND EXTENT OF USE

Irrigation: _____ acres. Sole supply of _____ acres.
 Stockwatering (number and kind): _____
 Domestic: _____ Families and/or _____ Persons.
 Municipal (name): _____
 Mining: _____ Mining District at the _____ Mine.
 Ores mined: _____
 Power: Plant name: _____ Type: _____ Capacity: _____
 Other (describe): Use water for gas well drilling

22. PLACE OF USE

Legal description of place of use by 40 acre tract(s): Section 17, T23S, R1W, SE/SW, SLBM

23. STORAGE

Reservoir Name: _____ Storage Period: from _____ to _____
 Capacity: _____ ac-ft. Inundated Area: _____ acres.
 Height of dam: _____ feet.
 Legal description of inundated area by 40 tract(s): _____

24. EXPLANATORY

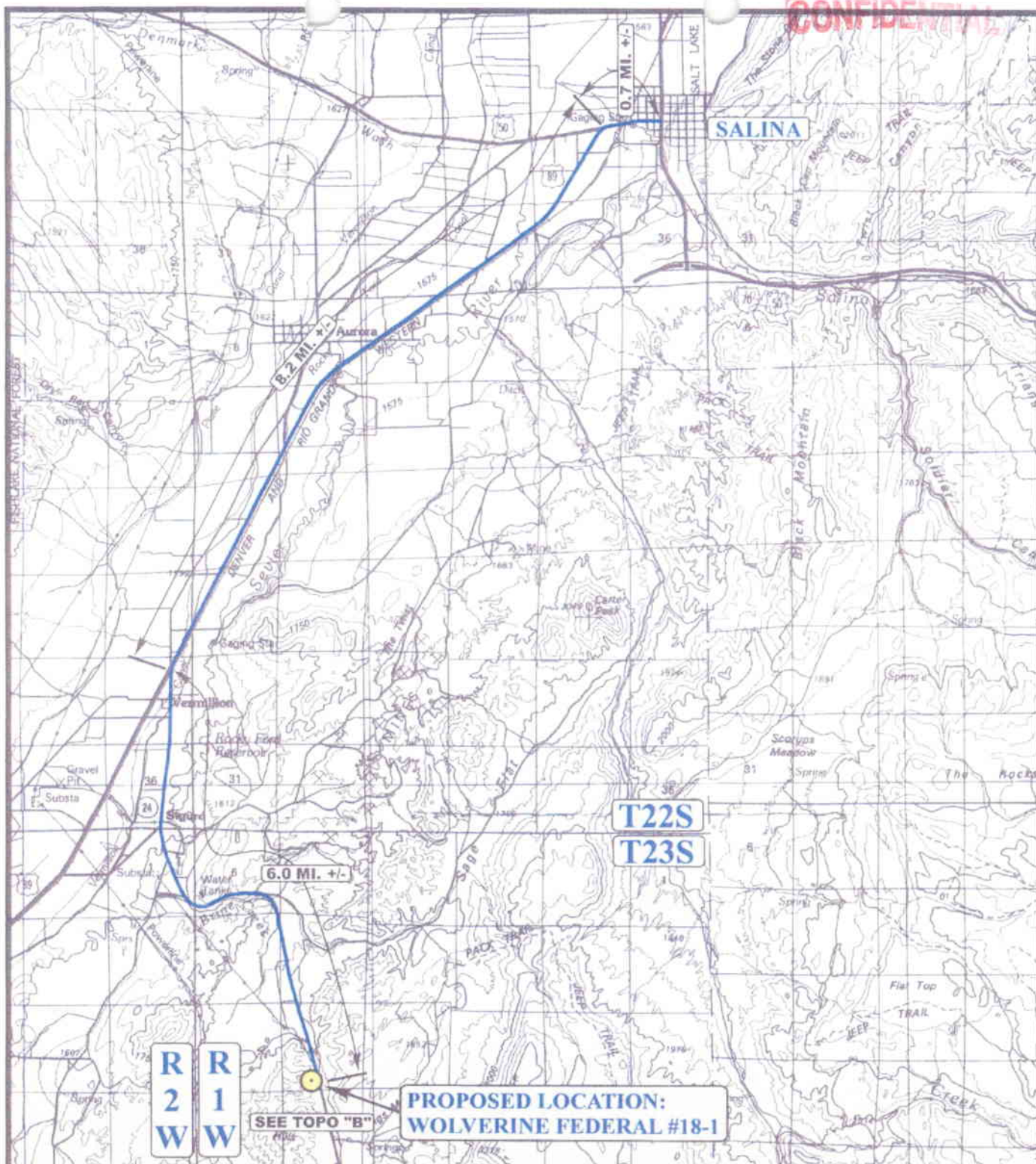
The following is set forth to define more clearly the full purpose of this application. Include any supplemental water rights used for the same purpose. (Use additional pages of same size if necessary):

Mack Dastrup (435) 896-5206	Kenneth Dastrup (435) 896-8759
P.O. Box 570125	P.O. Box 570056
Sigurd, Utah 84657	Sigurd, Utah 84657

The undersigned hereby acknowledges that even though he/she/they may have been assisted in the preparation of the above-numbered application through the courtesy of the employees of the Division of Water Rights, all responsibility for the accuracy of the information contained herein, at the time of filing, rests with the applicant(s).

Mack Dastrup
 Signature of Applicant(s)

CONFIDENTIAL



PROPOSED LOCATION:
WOLVERINE FEDERAL #18-1

SEE TOPO "B"

R
2
W
R
1
W

T22S
T23S

LEGEND:

● PROPOSED LOCATION

WOLVERINE GAS & OIL CORP.

WOLVERINE FEDERAL #18-1

SECTION 17, T23S, R1W, S.L.B.&M.

SE 1/4 SW 1/4

U E I S

Uintah Engineering & Land Surveying

85 South 200 East Vernal, Utah 84078

(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP

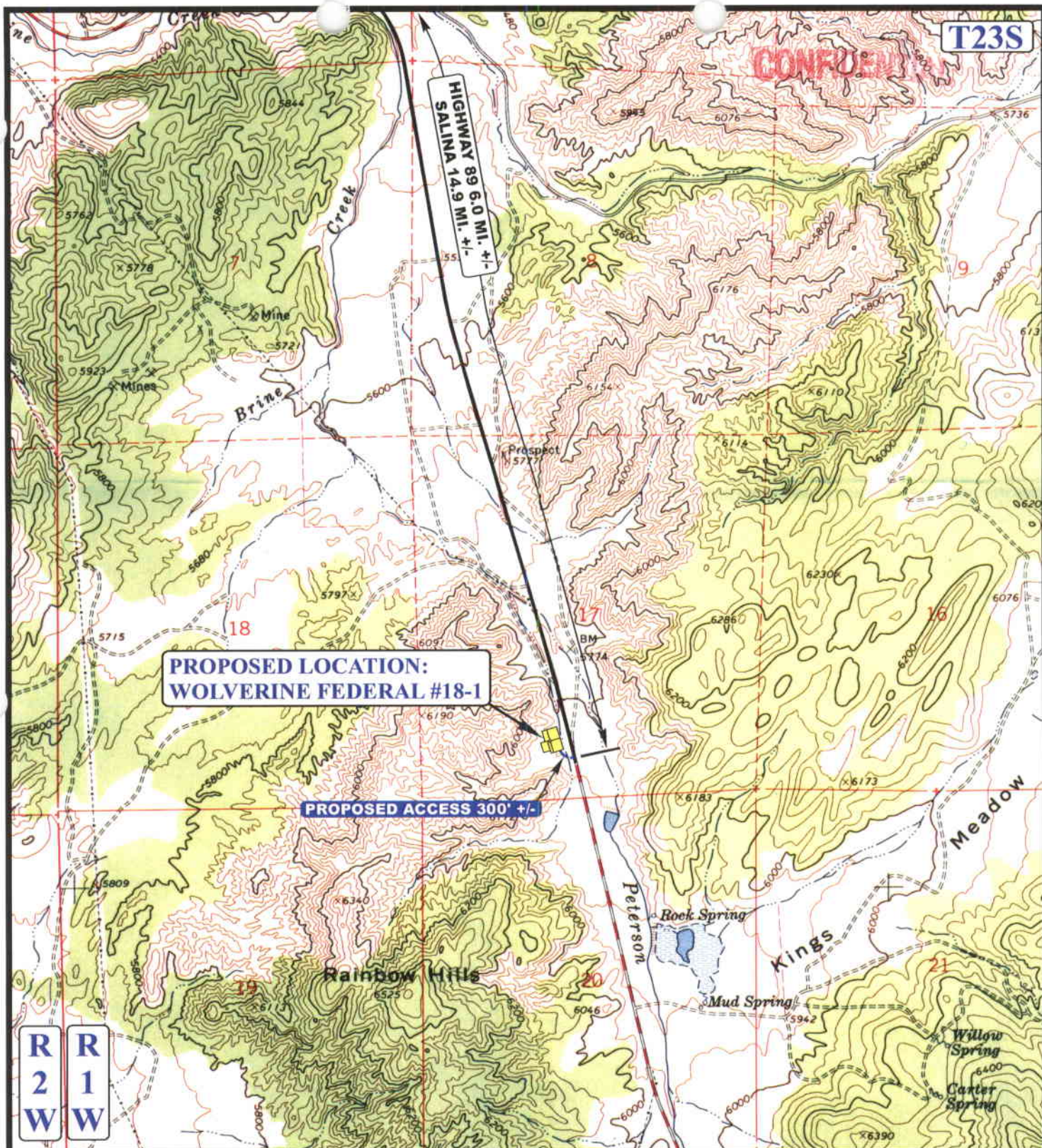
07 15 04

MONTH DAY YEAR

SCALE: 1:100,000 DRAWN BY: K.G. REVISED: 00-00-00

A

TOPO



T23S

CONFIDENTIAL

HIGHWAY 89 6.0 MI. +/-
SALINA 14.9 MI. +/-

**PROPOSED LOCATION:
WOLVERINE FEDERAL #18-1**

PROPOSED ACCESS 300' +/-

Rainbow Hills

Kings

Meadow

Spring

Mud Spring

Willow
Spring

Carter
Spring

R	R
2	1
W	W

LEGEND:

EXISTING ROAD

PROPOSED ACCESS ROAD

WOLVERINE GAS & OIL CORP.

WOLVERINE FEDERAL #18-1
SECTION 17, T23S, R1W, S.L.B.&M.
SE 1/4 SW 1/4

**TOPOGRAPHIC
MAP**

07 15 04
MONTH DAY YEAR

SCALE: 1" = 2000'	DRAWN BY: K.G.	REVISED: 00-00-00
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B
TOPO



Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

WOLVERINE GAS & OIL CORP.

EXISTING CROSS SECTIONS FOR

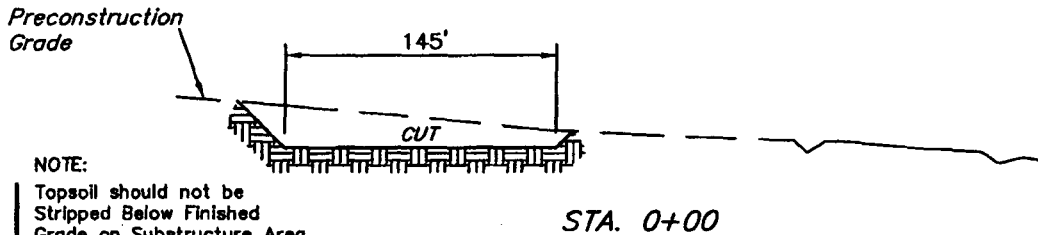
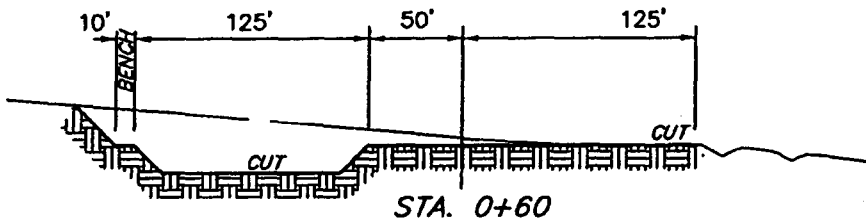
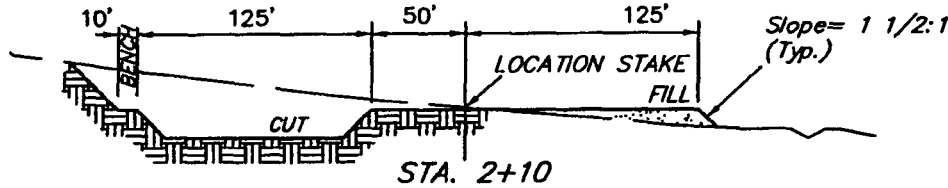
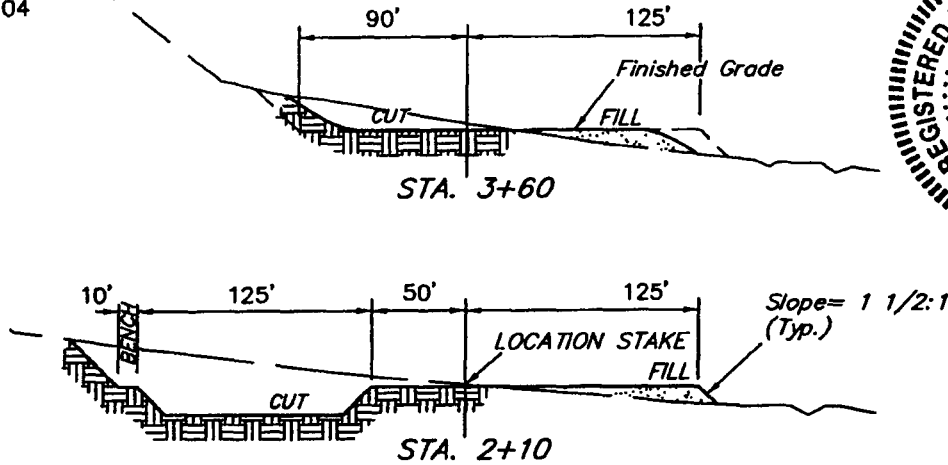
WOLVERINE FEDERAL #18-1
SECTION 17, T23S, R1W, S.L.B.&M.
845' FSL 1922' FWL

FIGURE #2

CONFIDENTIAL

1" = 40'
X-Section
Scale
1" = 100'

DATE: 3-10-04
Drawn By: C.G.
DATE: 4-12-04
DATE: 4-16-04
DATE: 7-19-04
DATE: 7-21-04



NOTE:
Topsoil should not be
Stripped Below Finished
Grade on Substructure Area.

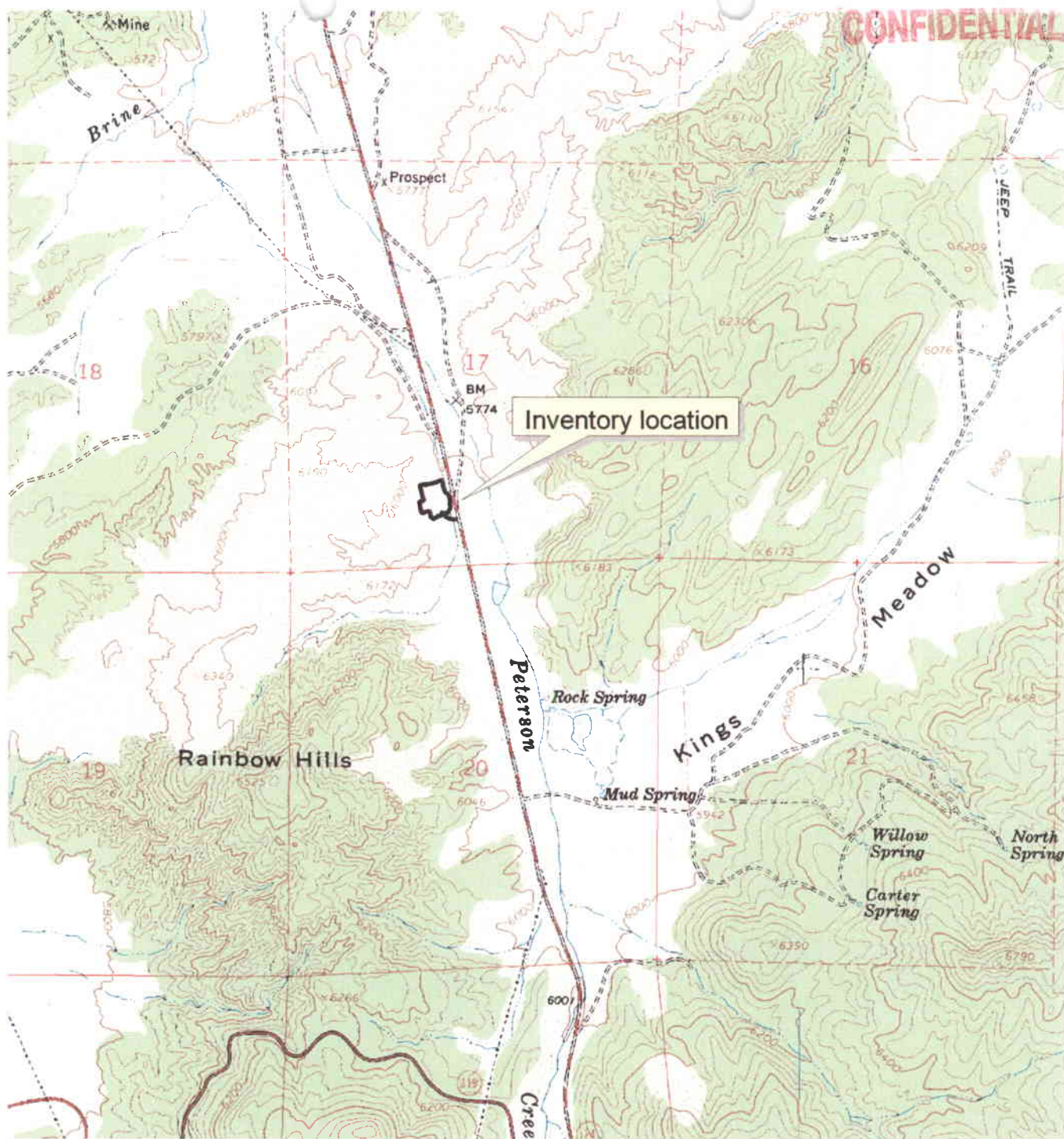
* NOTE:
FILL QUANTITY INCLUDES
5% FOR COMPACTION

APPROXIMATE YARDAGES

CUT	
(6") Topsoil Stripping	= 2,240 Cu. Yds.
Remaining Location	= 25,900 Cu. Yds.
TOTAL CUT	= 28,140 CU.YDS.
FILL	= 4,980 CU.YDS.

EXCESS MATERIAL	= 23,160 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 6,300 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	= 16,860 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East • Vernal, Utah 84078 • (435) 789-1017





Wolverine Gas & Oil Co of Utah, LLC

Azimuths to True North
Magnetic North: 12.95°



Magnetic Field
Strength: 521.36nT
Dip Angle: 64.57°
Date: 5/28/2004
Model: igr2000

Pad B-1
T23S R01W Sevier County, Utah
NW/4 SE/4 Sec 17

18-1 SFC Location
1922' FWL & 845' FSL Sec 17 23S 01W
Sevier County, UT

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	266.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	266.00	300.0	0.0	0.0	0.00	266.00	0.0	
3	1508.8	12.00	266.00	1500.0	-8.8	-125.8	0.99	266.00	126.1	
4	2058.1	28.48	265.97	2013.6	-22.1	-314.7	3.00	0.00	315.5	
5	6146.9	28.48	265.97	5607.6	-159.2	-2259.5	0.00	0.00	2265.1	
6	6596.2	15.00	265.97	6024.0	-170.9	-2425.2	3.00	180.00	2431.2	
7	7244.3	15.00	265.97	6650.0	-182.7	-2592.5	0.00	0.00	2598.9	

TARGET DETAILS

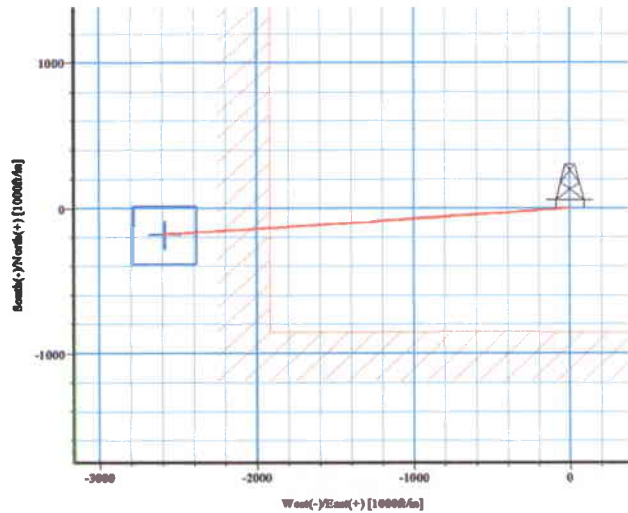
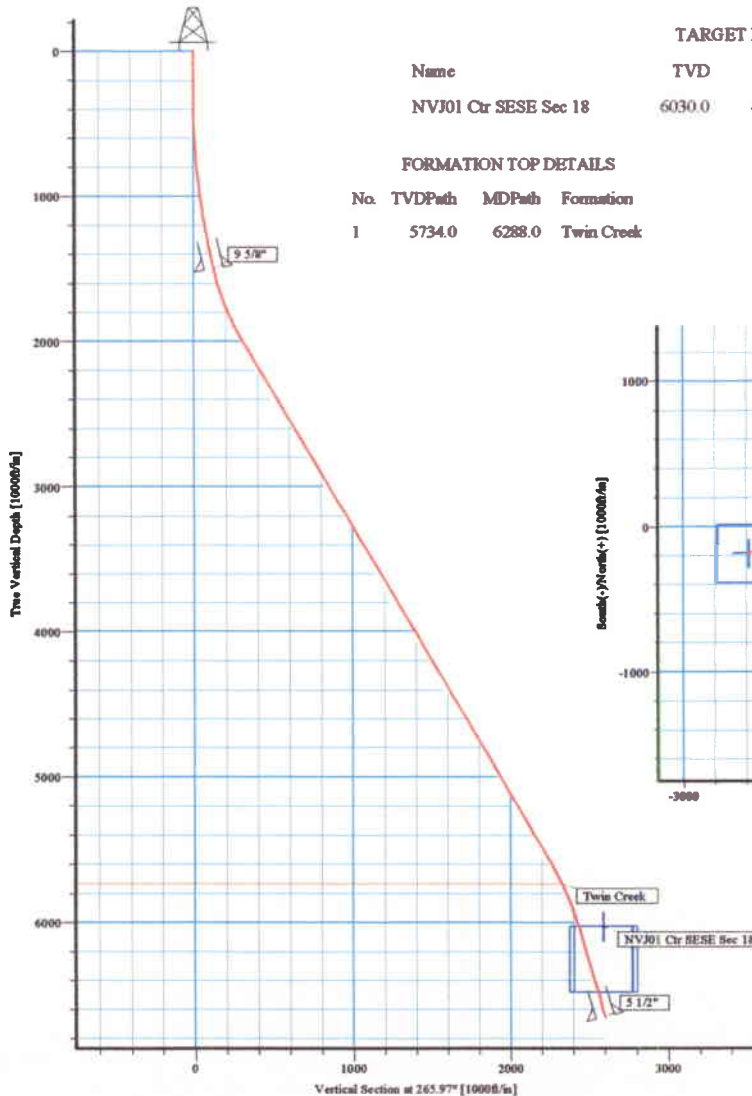
Name	TVD	+N/-S	+E/-W	Shape
NVJ01 Cr SESE Sec 18	6030.0	-185.0	-2582.0	Rectangle (400x400)

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	5734.0	6288.0	Twin Creek

CASING DETAILS

No.	TVD	MD	Name	Size
1	1500.0	1508.8	9 5/8"	9.625
2	6650.0	7244.3	5 1/2"	5.500



Plan View #1 (18-1/18-1)
Created By: Steve Schmitz, P.E. Date: 7/14/2004
Checked: _____ Date: _____

Weatherford Directional Services

Exploration Report

CONFIDENTIAL

Company: Wolverine Gas & Oil Co of Utah Field: Sevier County, Utah Site: Pad B-1 Well: 18-1 Wellpath: 18-1	Date: 7/12/2004 Co-ordinate(NE) Reference: Well: 18-1, True North Vertical (TVD) Reference: SITE 0.0 Section (VS) Reference: Well (0.00N,0.00E,285.97Azi) Survey Calculation Method: Minimum Curvature	Page: 1 Db: Sybase
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Site: Pad B-1
 Section 17 23S 1W Sevier County Utah
 830' FSL & 1901' FWL

Site Position: From: Geographic Position Uncertainty: 0.0 ft Ground Level: 0.0 ft	Northing: 169376.77 ft Easting: 1876068.36 ft	Latitude: 38 47 51.068 N Longitude: 111 56 5.240 W North Reference: True Grid Convergence: -0.28 deg
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Survey Program for Definitive Wellpath
Date: 6/14/2004 **Validated:** No
Actual From **To** **Survey**
 ft ft

Version: 1
Toolcode **Tool Name**

Survey

Stn	MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Tool	Radius ft
	0.0	0.00	266.00	0.0	0.0	0.0	0.0	0.00		
	100.0	0.00	266.00	100.0	0.0	0.0	0.0	0.00	MWD	
	200.0	0.00	266.00	200.0	0.0	0.0	0.0	0.00	MWD	
	300.0	0.00	266.00	300.0	0.0	0.0	0.0	0.00	MWD	
	400.0	0.99	266.00	400.0	-0.1	-0.9	0.9	0.99	MWD	
	500.0	1.99	266.00	500.0	-0.2	-3.5	3.5	0.99	MWD	
	600.0	2.98	266.00	599.9	-0.5	-7.8	7.8	0.99	MWD	
	700.0	3.97	266.00	699.7	-1.0	-13.8	13.9	0.99	MWD	
	800.0	4.96	266.00	799.4	-1.5	-21.6	21.6	0.99	MWD	
	900.0	5.96	266.00	898.9	-2.2	-31.1	31.2	0.99	MWD	
	1000.0	6.95	266.00	998.3	-3.0	-42.3	42.4	0.99	MWD	
	1100.0	7.94	266.00	1097.4	-3.9	-55.2	55.4	0.99	MWD	
	1200.0	8.93	266.00	1196.4	-4.9	-69.9	70.0	0.99	MWD	
	1300.0	9.93	266.00	1295.0	-6.0	-86.2	86.4	0.99	MWD	
	1400.0	10.92	266.00	1393.4	-7.3	-104.3	104.5	0.99	MWD	
	1508.8	12.00	266.00	1500.0	-8.8	-125.8	126.1	0.99	9 5/8"	
	1600.0	14.74	266.00	1588.7	-10.3	-146.8	147.2	3.00	MWD	
	1700.0	17.74	266.00	1684.7	-12.2	-174.7	175.2	3.00	MWD	
	1800.0	20.74	266.00	1779.1	-14.5	-207.6	208.1	3.00	MWD	
	1900.0	23.74	266.00	1871.7	-17.2	-245.3	245.9	3.00	MWD	
	2000.0	26.74	266.00	1962.1	-20.1	-287.9	288.6	3.00	MWD	
	2058.1	28.48	265.97	2013.6	-22.1	-314.7	315.5	3.00	MWD	
	2100.0	28.48	265.97	2050.4	-23.5	-334.6	335.5	0.00	MWD	
	2200.0	28.48	265.97	2138.3	-26.9	-382.2	383.2	0.00	MWD	
	2300.0	28.48	265.97	2226.2	-30.2	-429.8	430.8	0.00	MWD	
	2400.0	28.48	265.97	2314.1	-33.6	-477.3	478.5	0.00	MWD	
	2500.0	28.48	265.97	2402.0	-36.9	-524.9	526.2	0.00	MWD	
	2600.0	28.48	265.97	2489.9	-40.3	-572.5	573.9	0.00	MWD	
	2700.0	28.48	265.97	2577.8	-43.6	-620.0	621.6	0.00	MWD	
	2800.0	28.48	265.97	2665.7	-47.0	-667.6	669.2	0.00	MWD	
	2900.0	28.48	265.97	2753.6	-50.3	-715.2	716.9	0.00	MWD	
	3000.0	28.48	265.97	2841.5	-53.7	-762.7	764.6	0.00	MWD	
	3100.0	28.48	265.97	2929.4	-57.0	-810.3	812.3	0.00	MWD	
	3200.0	28.48	265.97	3017.3	-60.4	-857.9	860.0	0.00	MWD	
	3300.0	28.48	265.97	3105.2	-63.8	-905.4	907.7	0.00	MWD	
	3400.0	28.48	265.97	3193.1	-67.1	-953.0	955.3	0.00	MWD	
	3500.0	28.48	265.97	3281.0	-70.5	-1000.5	1003.0	0.00	MWD	
	3600.0	28.48	265.97	3368.9	-73.8	-1048.1	1050.7	0.00	MWD	
	3700.0	28.48	265.97	3456.8	-77.2	-1095.7	1098.4	0.00	MWD	
	3800.0	28.48	265.97	3544.7	-80.5	-1143.2	1146.1	0.00	MWD	
	3900.0	28.48	265.97	3632.6	-83.9	-1190.8	1193.8	0.00	MWD	

Weatherford Directional Services

Exploration Report

CONFIDENTIAL

Company: Wolverine Gas & Oil Co of Utah
Field: Sevier County, Utah
Site: Pad B-1
Well: 18-1
Wellpath: 18-1

Date: 7/12/2004 Time: 11:52:23 Page: 2
Co-ordinate(NE) Reference: Well: 18-1, True North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,265.97Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

Sta	MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Tool	Radius ft
	4000.0	28.48	265.97	3720.5	-87.2	-1238.4	1241.4	0.00	MWD	
	4100.0	28.48	265.97	3808.4	-90.6	-1285.9	1289.1	0.00	MWD	
	4200.0	28.48	265.97	3896.3	-93.9	-1333.5	1336.8	0.00	MWD	
	4300.0	28.48	265.97	3984.2	-97.3	-1381.1	1384.5	0.00	MWD	
	4400.0	28.48	265.97	4072.1	-100.6	-1428.6	1432.2	0.00	MWD	
	4500.0	28.48	265.97	4160.0	-104.0	-1476.2	1479.9	0.00	MWD	
	4600.0	28.48	265.97	4247.9	-107.3	-1523.8	1527.5	0.00	MWD	
	4700.0	28.48	265.97	4335.8	-110.7	-1571.3	1575.2	0.00	MWD	
	4800.0	28.48	265.97	4423.7	-114.0	-1618.9	1622.9	0.00	MWD	
	4900.0	28.48	265.97	4511.6	-117.4	-1666.5	1670.6	0.00	MWD	
	5000.0	28.48	265.97	4599.5	-120.7	-1714.0	1718.3	0.00	MWD	
	5100.0	28.48	265.97	4687.4	-124.1	-1761.6	1766.0	0.00	MWD	
	5200.0	28.48	265.97	4775.3	-127.5	-1809.2	1813.6	0.00	MWD	
	5300.0	28.48	265.97	4863.2	-130.8	-1856.7	1861.3	0.00	MWD	
	5400.0	28.48	265.97	4951.1	-134.2	-1904.3	1909.0	0.00	MWD	
	5500.0	28.48	265.97	5039.0	-137.5	-1951.8	1956.7	0.00	MWD	
	5600.0	28.48	265.97	5126.9	-140.9	-1999.4	2004.4	0.00	MWD	
	5700.0	28.48	265.97	5214.8	-144.2	-2047.0	2052.0	0.00	MWD	
	5800.0	28.48	265.97	5302.7	-147.6	-2094.5	2099.7	0.00	MWD	
	5900.0	28.48	265.97	5390.6	-150.9	-2142.1	2147.4	0.00	MWD	
	6000.0	28.48	265.97	5478.5	-154.3	-2189.7	2195.1	0.00	MWD	
	6100.0	28.48	265.97	5566.4	-157.6	-2237.2	2242.8	0.00	MWD	
	6146.9	28.48	265.97	5607.6	-159.2	-2259.5	2265.1	0.00	MWD	
	6200.0	26.89	265.97	5654.7	-160.9	-2284.1	2289.8	3.00	MWD	
	6288.0	24.25	265.97	5734.0	-163.6	-2322.0	2327.8	3.00	Twin Cre	
	6300.0	23.89	265.97	5745.0	-164.0	-2326.9	2332.7	3.00	MWD	
	6400.0	20.89	265.97	5837.4	-166.6	-2364.9	2370.8	3.00	MWD	
	6500.0	17.89	265.97	5931.8	-169.0	-2398.0	2403.9	3.00	MWD	
	6596.2	15.00	265.97	6024.0	-170.9	-2425.2	2431.2	3.00	*NVJ01 C	
	6600.0	15.00	265.97	6027.7	-170.9	-2426.1	2432.2	0.00	MWD	
	6700.0	15.00	265.97	6124.3	-172.8	-2452.0	2458.0	0.00	MWD	
	6800.0	15.00	265.97	6220.9	-174.6	-2477.8	2483.9	0.00	MWD	
	6900.0	15.00	265.97	6317.5	-176.4	-2503.6	2509.8	0.00	MWD	
	7000.0	15.00	265.97	6414.1	-178.2	-2529.4	2535.7	0.00	MWD	
	7100.0	15.00	265.97	6510.7	-180.0	-2555.2	2561.6	0.00	MWD	
	7200.0	15.00	265.97	6607.2	-181.9	-2581.0	2587.4	0.00	MWD	
	7244.3	15.00	265.97	6650.0	-182.7	-2592.5	2598.9	0.00	5 1/2"	

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
1508.8	1500.0	9.625	12.250	9 5/8"
7244.3	6650.0	5.500	6.000	5 1/2"

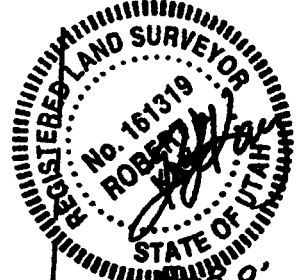
Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
6288.0	5734.0	Twin Creek		0.00	0.00

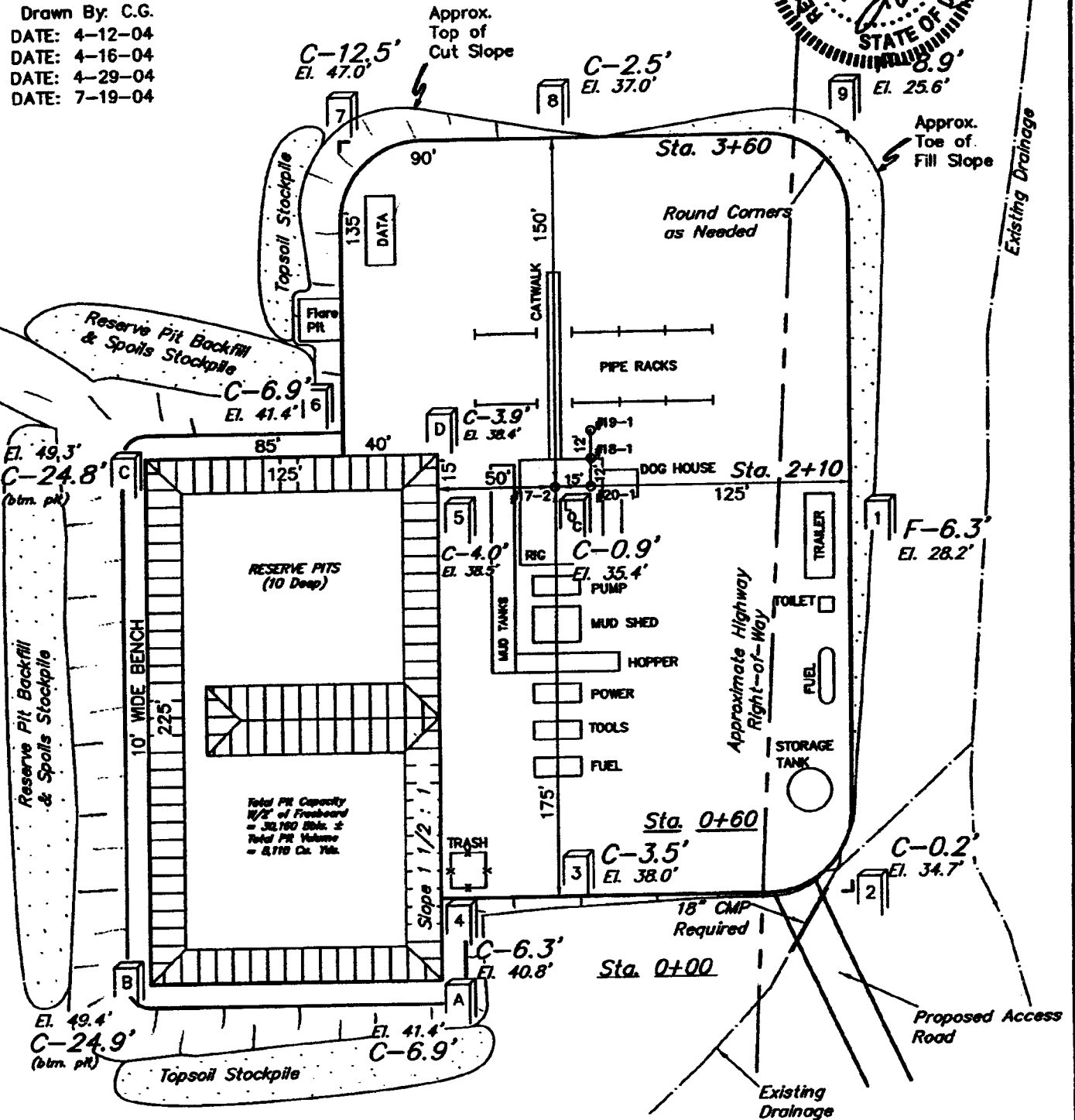
WOLVERINE GAS & OIL COMPANY ~~FIGURE~~ #1

LOCATION LAYOUT FOR

WOLVERINE FEDERAL #18-1
SECTION 17, T23S, R1W, S.L.B.&M.
845' FSL 1922' FWL



SCALE: 1" = 60'
DATE: 3-10-04
Drawn By: C.G.
DATE: 4-12-04
DATE: 4-16-04
DATE: 4-29-04
DATE: 7-19-04



Elev. Ungraded Ground at Location Stake = 5835.4'
Elev. Graded Ground at Location Stake = 5834.5'

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East • Vernal, Utah 84078 • (435) 789-1017

WOLVERINE GAS & OIL COR.

TYPICAL CROSS SECTIONS FOR

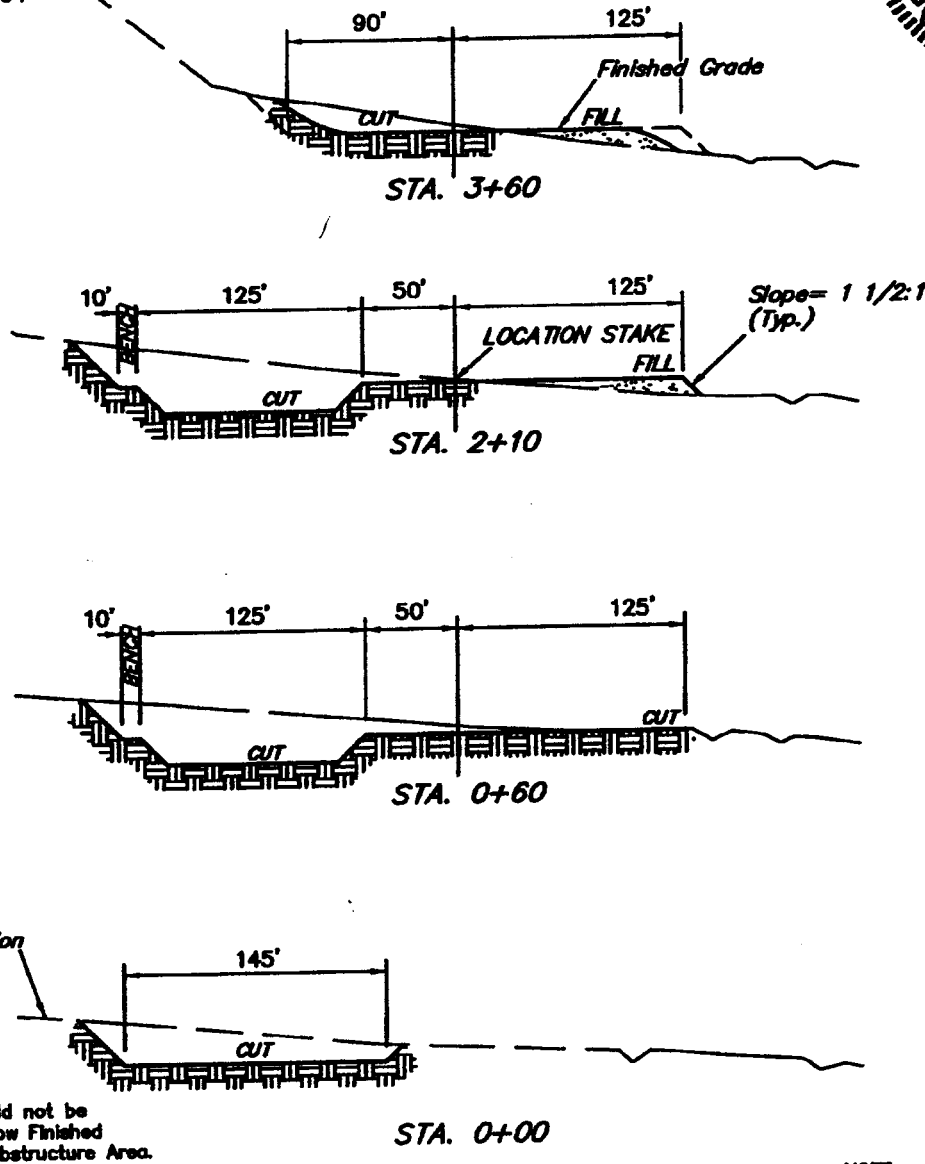
WOLVERINE FEDERAL #18-1
SECTION 17, T23S, R1W, S.L.B.&M.
845' FSL 1922' FWL

FIGURE #2

CONFIDENTIAL

1" = 40'
X-Section
Scale
1" = 100'

DATE: 3-10-04
Drawn By: C.G.
DATE: 4-12-04
DATE: 4-16-04
DATE: 7-19-04



APPROXIMATE YARDAGES

CUT
(6") Topsoil Stripping = 2,240 Cu. Yds.
Remaining Location = 25,900 Cu. Yds.
TOTAL CUT = 28,140 CU.YDS.
FILL = 4,980 CU.YDS.

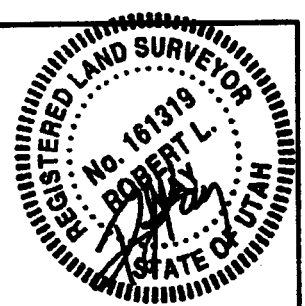
EXCESS MATERIAL = 23,160 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.) = 6,300 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation) = 16,860 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East • Vernal, Utah 84078 • (435) 789-1017

* NOTE:
FILL QUANTITY INCLUDES
5% FOR COMPACTION

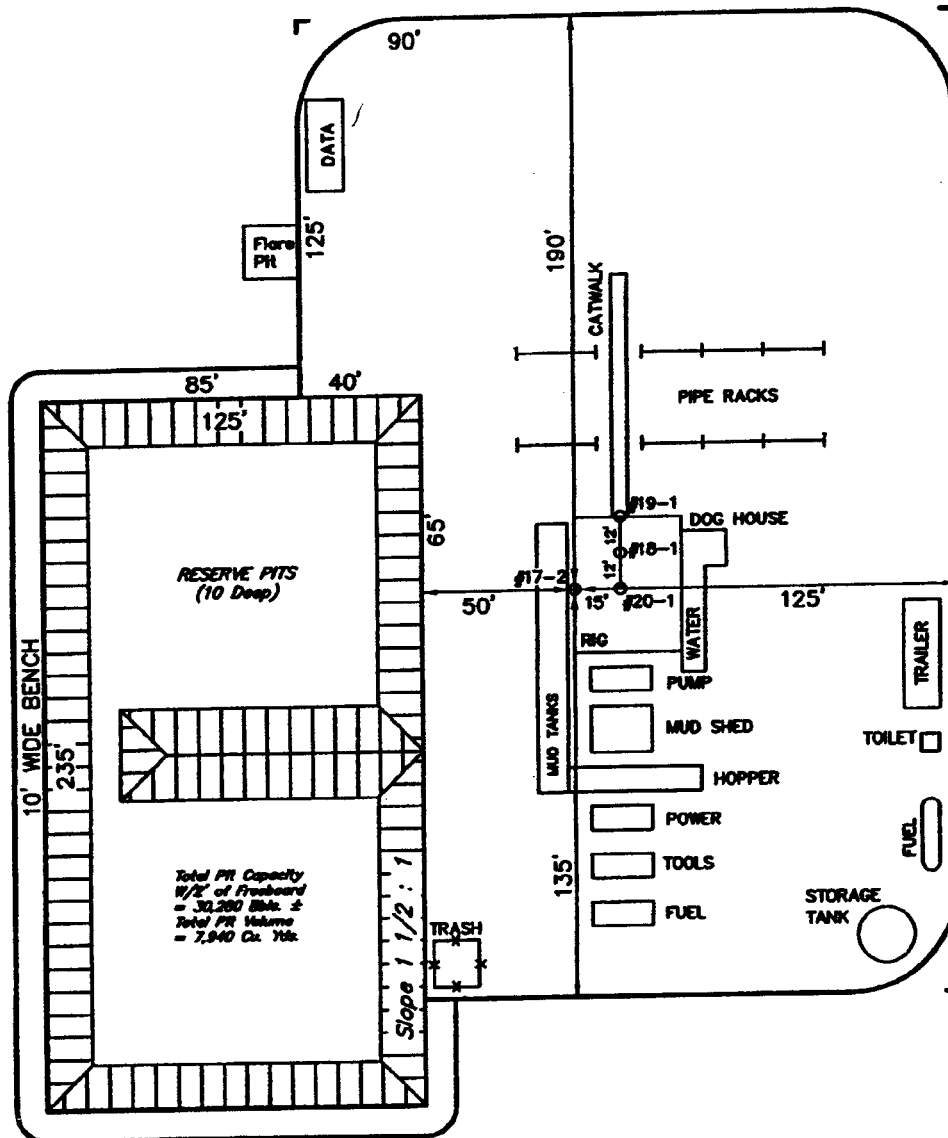


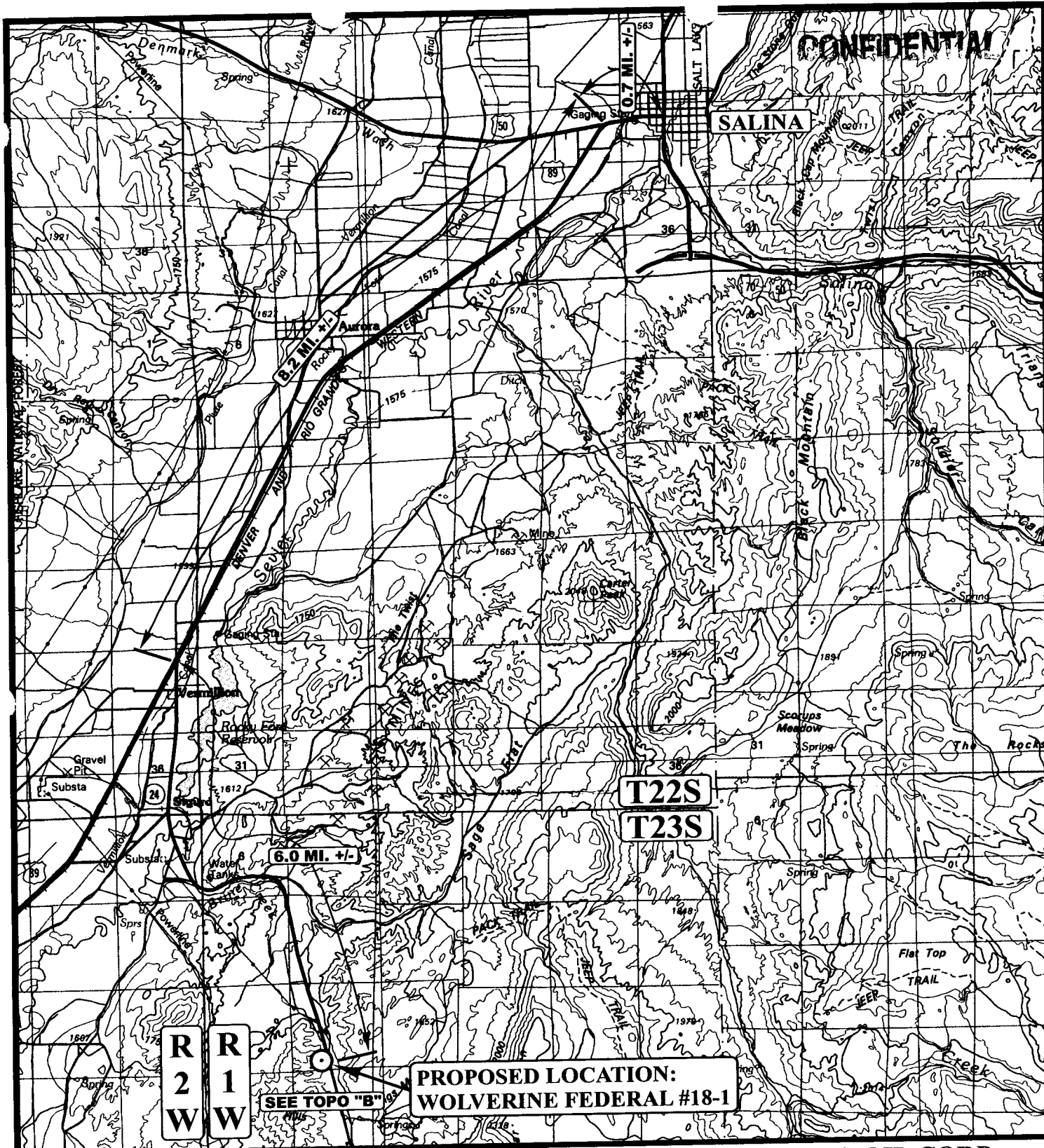
WOLVERINE GAS & OIL CO. (P.)
TYPICAL RIG LAYOUT FOR
WOLVERINE FEDERAL #18-1
SECTION 17, T23S, R1W, S.L.B.&M.
845' FSL 1922' FWL



SCALE: 1" = 60'
DATE: 6-17-04
Drawn By: C.G.
DATE: 7-7-04

CONFIDENTIAL





CONFIDENTIAL

SALINA

**T22S
T23S**

**R
2
W
R
1
W**

**PROPOSED LOCATION:
WOLVERINE FEDERAL #18-1**

SEE TOPO "B"

LEGEND:

○ PROPOSED LOCATION



WOLVERINE GAS & OIL CORP.

**WOLVERINE FEDERAL #18-1
SECTION 17, T23S, R1W, S.L.B.&M.
SE 1/4 SW 1/4**



Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

**TOPOGRAPHIC
MAP**

07 15 04
MONTH DAY YEAR

SCALE: 1:100,000 DRAWN BY: K.G. REVISED: 00-00-00

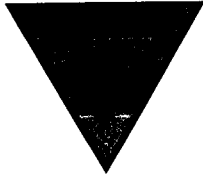


T23S

CONFIDENTIALHIGHWAY 89 6.0 MI. +/-
SALINA 14.9 MI. +/-**PROPOSED LOCATION:
WOLVERINE FEDERAL #18-1****PROPOSED ACCESS 300' +/-**R
2
W
R
1
W**LEGEND:**— EXISTING ROAD
- - - PROPOSED ACCESS ROAD**WOLVERINE GAS & OIL CORP.****WOLVERINE FEDERAL #18-1
SECTION 17, T23S, R1W, S.L.B.&M.
SE 1/4 SW 1/4****U
E
L
S**Utah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813**TOPOGRAPHIC
MAP****07 15 04**
MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: K.G. REVISED: 00-00-00

**B
TOPO**

**WOLVERINE GAS AND OIL CORPORATION***Energy Exploration in Partnership with the Environment*

July 26, 2004

United States Department of the Interior
Bureau of Land Management
Richfield Field Office
150 East 900 North
Richfield, Utah 84701

RE: Designated Agent Contact Information: Wolverine Federal #18-1

To Whom It May Concern:

Wolverine Gas and Oil of Utah, LLC (Wolverine) is designating Western Land Services, Inc. as Agent for the above captioned well. Questions, deficiencies and clarifications regarding this APD package should be directed to the following contacts with Western Land Services, Inc.:

Shawn Burd
(310 South 100 East, Richfield, UT 84701)
Richfield Office: 435-896-1943
Cellular Phone: 435-979-4689
E-mail: shawn.burd@westernls.com

OR:

Don Anderson
(54 West Seymour, Sheridan, WY 82801)
Office: 307-673-1817
E-mail: don.anderson@westernls.com

Approvals or other notifications should be directed to me at Wolverine and to the Agent named above. My contact information is contained within the letterhead address below (extension 119) and my e-mail address is: rmoritz@wolvgas.com

Sincerely,

Wolverine Gas and Oil Company of Utah, LLC

Richard D. Moritz
Vice-President, Land & Legal

BOND STATEMENT

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Wolverine Gas and Oil Company of Utah, LLC with their Bond, filed with Bureau of Land Management in the amount of \$25,000.

The Bond Number is WY3329

OPERATOR'S REPRESENTATIVE AND CERTIFICATIONS

The responsible field representative for the Wolverine Federal #18-1, on behalf of Wolverine Gas and Oil Company of Utah, LLC, is Steve Hash, PE, available via Wolverine Gas and Oil Company of Utah, LLC, One Riverfront Plaza, 55 Campau NW, Grand Rapids, MI 49503. (616) 458-1150.

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access route; that I am familiar with the conditions that currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Wolverine Gas and Oil Company of Utah, LLC and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date:

July 28, 2004

Name and Title:


Richard Moritz, Vice-President, Land and Legal

OPERATOR RIDER

This rider is being submitted to comply with 43 CFR 3104.2 which states "... The operator on the ground shall be covered by a bond in his/her own name as principal, or a bond in the name of the lessee or sublessee, provided that a consent of the surety, or the obligor in the case of a personal bond, to include the operator under the coverage of the bond is furnished to the Bureau of the maintaining the bond."

The obligor hereby agrees to extend the coverage of their bond to include liabilities for operations conducted by Wolverine Gas and Oil Company of Utah, LLC and Wolverine Gas and Oil Company of Wyoming, LLC on Federal oil and gas leases.

Coverage includes the performance of all lease obligations, both past and future, including the responsibility to properly plug and abandon any and all wells, including related surface restoration, and to pay any outstanding rentals or royalties due.

This coverage of operations shall continue whether or not the lease subsequently expires, terminates, is canceled, or relinquished; provided, however, that this rider shall not act to increase the actual cumulative or potential liability of the obligor above the face amount of the bond.

Executed this 3rd day of March, 2004.

Witness:

Evelyn Telgen
Evelyn Telgen

One Riverfront Plaza, 55 Campau NW
Grand Rapids, MI 49503-2616
Address of witness

Wolverine Gas and Oil Corporation
Obligor

Gary R. Blocker
For Obligor: Gary R. Blocker
Vice President and COO

One Riverfront Plaza, 55 Campau NW
Grand Rapids, MI 49503-2616
Obligor's address

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC**DRILLING PROGNOSIS**

Wolverine Federal #18-1
SE SE SEC 18-T23S-R1W
SEVIER CO., UTAH

BRIEF DRILLING PLAN

Due to surface topography constraints, directionally drill a 7250' MD (6650'TVD) test of the Navajo 1 formation on a day work contract basis from Wolverine's present work area known as Drill Pad B-1 located in Sec 17 T23S – R01W, Sevier Co, UT. Please refer to the directional drilling plan attached for detailed hole angle, trajectory and target information. Deviation is the primary drilling concern in this area. No abnormal pressure or hydrogen sulfide gas is expected, however, an H2S detector will be utilized. The projected surface and bottom hole locations are to be as follows:

Surface Location: 845' fsl & 1922' fwl of Sec 17 T23N – R01W
BHL @ top of NVJO1 (6030' TVD) 660' fsl & 660' fel of Sec 18 T23N – R01W

14" conductor casing will be cemented to surface at approximately 80 ft BGL. 9-5/8" surface casing will be set & cemented to surface in a 12-1/4" hole deviated to approximately 10 deg at +/-1509' (+/-1500' TVD). An 8-3/4" hole will then be drilled to +/- 7250' (6650' TVD). 5-1/2" production casing will then be set & cemented to 500' into the surface casing.

EMERGENCY NUMBERS

Sevier Valley Medical Center	(435)-896-8271
Medical Helicopter	(800)-453-0120
Sheriff Department	(435)-896-2600
Fire Department-Richfield, UT	(435)-896-5479
Bureau of Land Management (Richfield):	(435)-896-1500
Bureau of Land Management (Salt Lake City)	(801) 539-4045
Utah Division of Oil, Gas and Mining (Salt Lake City):	(801)-538-5340

Bureau of Land Management;

Contact Al McKee with BLM (801) 539-4045 24 hrs prior to 1) spudding, running and cementing all casing strings 2) Pressure testing of BOPE or any casing string 3) Pressure integrity test (mud weight equivalency test) of each casing shoe.

NOTE: Ensure the rig, the cementing and testing procedures ALL comply with BLM and Onshore Oil and Gas Order No. 2, requirements.

Utah Division of Oil, Gas and Mining

Contact Carol Daniels (801) 538-5284, 24 hrs prior to spudding

GENERAL INFORMATION

OBJECTIVE: Navajo 1 @ 6030' (TVD)

ELEVATION: 5835' GL (est)

PROJECTED TOTAL DEPTH:

7,250 MD; 6650' TVD

SURFACE LOCATION:

845' FSL & 1922' FWL
Section 17-23S-1W

COUNTY: Sevier

STATE: Utah

DIRECTIONS TO LOCATION:

From town of Sigurd, Utah go south approximately 4.5 miles on Hwy #24 to location on the right side of road.

PROPOSED CASING PROGRAM:

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Measured Depth Set
	14"				80'
12¼"	9-5/8"	36#	J-55	STC	0'-1,510'
8-3/4"	5½"	17#	L-80	LTC	0'-7,250'

Hole Size	Casing Size	Drift ID, in.	OD of Couplings	Annular Volume in OH, cf/ft	Annular Volume in Csg, cf/ft	Capacity of casing, cf/ft
	14"					
12¼"	9-5/8"	8.379	10.625	0.3127	0.4659	0.4340
8-3/4"	5½"	4.767	6.050	0.2526	0.2691	0.1305

GEOLOGIC INFORMATION:

Formation	Interval (TVD)	Interval (MD)	Lithology	Prod	Abnormal Psi
Arapien	Surf – 5734'	Surf – 6288'	Shale, siltstone, salt, evaporites		
TwinCreek I	5734' - 6030'	6288' – 6603'	Carbonates		
Navajo 1	6030' - 6450'	6603' – 7050'	Sandstone w/ minor shale	X	
Total Depth	6650'	7250'	Sandstone w/ minor shale		

CONSTRUCTION OF SURFACE LOCATION

325'x 175' Pad
 225'x 125' x 10' Reserve Pit with a 12 mil synthetic liner
 72" diameter tin horn cellar, 4' to 5' deep.
 Flare pit a minimum of 100' from wellhead.

SURFACE HOLE: 0' to 1510'

Directionally drill a 12-1/4" hole with a TCI rock bit, mud motor & MWD equipment to approximately 1510' using fresh water and gel/lime sweeps when necessary (make hole to fit 9-5/8" casing). Loss circulation is not expected to be a problem in this interval. If losses do occur, begin pumping LCM sweeps. If loss circulation cannot be healed with ± 25 ppb LCM, consider dry drilling (no returns). Run survey at every 200' and at TD or as needed to insure bottom hole location.

PRESSURE CONTROL & SAFETY EQUIPMENT FOR SURFACE HOLE**Bottom to Top**

14" x 13-5/8" 3M weld on flange
 13-5/8" 3M x 13-5/8" 3M spacer spool w/ 3" outlets & valves.
 13-5/8" 3M Annular preventer, connected to accumulator with enough capacity to close annular and retain 200 psi above pre-charge pressure
 13-5/8" Drilling Nipple with fill up and circulating line.
 Upper kelly cock valves with handles available

Test Annular to 1500 psi. Test all valves and lines.

MUD PROGRAM FOR SURFACE HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	PH	FLUID LOSS
0 -1510'	8.4 – 8.9	FW/Gel/Lime	26-45	7-9	N/C

Note: Sweep hole every 100 – 200 feet or as needed for hole cleaning. Control the pH with Lime & Caustic to aid in gel flocculation for better carrying capacity.

CASING PROGRAM FOR SURFACE HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
0 - 1510'	9 5/8"	1510'	36#	J-55	ST&C	

Casing Running Sequence:

Texas pattern notched guide shoe,

1 jt of 9 5/8" 36# J-55 ST&C

Float collar

Balance of 9-5/8" 36# J-55 ST&C

10 – centralizers equally spaced.

RU cement co., hold safety meeting, test lines, cement 9-5/8" casing per cement company recommendation. Displace with fresh water or mud if used. *Do not overdisplace cement.*

CEMENTING PROGRAM FOR SURFACE HOLE**Lead:**

360 sx 35:65 Poz: Class C or type 5
6% Bentonite
1% Calcium Chloride
0.25 lb/sx Cello Flake

Mixed at: 12.8 ppg
Yield: 1.78 ft³/sx
Water: 9.42 gal/sx

Tail:

280 sx Class G
2% Calcium Chloride
.25 lb/sx Cello Flake

Mixed at: 15.6 ppg
Yield: 1.20 ft³/sx
Water: 5.25 gal/sx

MUST CIRCULATE CEMENT TO SURFACE per BLM requirements. If the cement does **not** circulate to surface contact the BLM office at (435) 896-1500. They will require either a temperature survey or a cement bond log to be run, then determine what remedial action will be taken before drilling out.

WOC A TOTAL OF 24 HOURS:

Wait 4 hours with the hydrostatic pressure of the displacement fluid in place, then cut off conductor and weld on an 11" 3M x 9-5/8" SOW casing head. NU BOPE and choke manifold.

**PRESSURE CONTROL AND SAFETY EQUIPMENT FOR
PRODUCTION STRING****Bottom to Top**

11" 3M x 9-5/8" csg head.

11" 3M x 11" 3M spacer spool

11" 3M Double Ram Preventer w/ 4-1/2" Pipe ram on top and blind ram on bottom. Two side outlets, choke side will have two 3" x 3M gate valves. Kill side will have two 2-1/16 x 3M gate valves and one 2" x 3M check valve.

Connect BOP to choke manifold with pressure guage.

11" 3M Annular preventer.

11" 3M short rotating head with fill-up line

Upper kelly cock valves with handles available

Safety valves and subs to fit all drill string connections in use

Inside BOP or float sub available

Testing Procedure:**Annular Preventer**

The annular preventer will be pressure tested to 1500 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 1) When the annular is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week.

Blowout Preventer

The BOP, choke manifold and related equipment will be pressure tested to 2500 psi, 70% of the internal yield of the casing. Pressure will be maintained for a period of at least ten minutes or until the requirements of the test are met, whichever is longer. At a minimum the pressure test will be performed:

- 1) When the BOP is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills will be recorded in the IADC driller's log.

Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have 2 independent power sources to close the preventers. Nitrogen bottles may be one of the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

The accumulator pre-charge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six months thereafter. The accumulator pressure will be corrected if the measured pre-charge pressure is found to be above or below the maximum or minimum limits specified in Onshore Oil & Gas Order Number 2 (only nitrogen gas may be used to pre-charge).

Choke Manifold Equipment, Valves and Remote Controls

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration

A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

The choke manifold and BOP extension rods with hand wheels will be located outside the rig sub structure. The hydraulic BOP closing unit will be located at least twenty-five feet from the well head but readily accessible to the driller. Exact locations and configurations of the hydraulic BOP closing unit will depend upon the particular rig contracted to drill this well.

A flare line will be installed after the choke manifold, extending 125 feet from the center of the drill hole to a separate flare pit.

PRODUCTION HOLE: 1,510' TO 7,250'

Trip in the hole with an 8 3/4" insert bit, mud motor & MWD. Drill float, shoe and 20' of new hole. Perform an integrity test to 820 psi (10.5 ppg mud wt equivalent). Drill with a salt saturated mud to the top of the Twin Creek formation.

MUD PROGRAM FOR PRODUCTION HOLE

<u>DEPTH</u>	<u>MUD WEIGHT</u>	<u>TYPE</u>	<u>VISC</u>	<u>pH</u>	<u>FLUID LOSS</u>
1510' - 6500'	9.8 - 10.3	Saturated Salt	34-45	9.0-10.0	20cc or Less
6500' - 7250'	9.8 - 10.3	Saturated Salt	36-45	9.0-10.0	12cc or Less

Add bulk salt to increase weight to 9.8 ppg. Maintain the pH at 9.0 to 10.0 using lime and caustic. Walk viscosity up to 34 cp. Start bringing fluid loss up to 20 cc. If loss circulation becomes a problem use LCM sweeps to control seepage & clean hole.

EVALUATION PROGRAM FOR PRODUCTION HOLE

At TD, circulate and condition hole clean for logs. Short trip to the last bit trip depth monitoring well closely for flow. TOH for logs.

Mudlogger: From surface casing to total depth.

Electric Logs:

Tool	Surf csg to TD
Dipole Sonic w/ GR	Yes
Dual laterolog and microlog w/ GR & Caliper	Yes, GR to surf
LithoDensity/Neutron w/ GR & Caliper	Yes
Micro Imaging Dipmeter	Yes

DST: To be decided

Cores: To be decided

CASING PROGRAM FOR PRODUCTION HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
0' – TD'	5 ½"	7250'	17.0#	L-80	LT&C	

Rig up casing tools and run 5 ½" production casing as follows:

Float shoe

2 joint of 5 ½" 17.0# L-80 LT&C casing

Float collar

28 Centralizers, middle shoe joint and one every other joint to 5000'.

Run balance of 5 ½" 17.0# L-80.

CEMENT PROGRAM FOR PRODUCTION CASING**Lead:**

750 sx (50:50) Poz: Premium

3 % Bentonite

0.4% Halad R-567 (Low Fluid Loss Control)

15 % Salt

5 lbm/sk Gilsonite

0.3% D-AIR 3000 (Defoamer)

0.25 lb/sx Flocele

Weight: 13.0 ppg

Yield: 1.76 ft³/sx

Water: 8.44 gal/sx

Tail:

350 sx (50:50) Poz: Premium

2 % Bentonite

0.2% Halad R-322 (Low Fluid Loss Control)

3 % KCLSalt

3 lbm/sk Silicate Compacted (light Weight Additive)

1 lbm/sk Granulite TR ¼ (Lost Circulation Additive)

0.2% WG-17 (Suspension Agent)

0.25 lb/sx Flocele

Weight: 13.4 ppg

Yield: 1.49 ft³/sx

Water: 7.09 gal/sx

TOC at ± 1,000 ft

Calculate cement volume based on log caliper +/- 20%. Displace cement w/water.

Set slips, ND BOP's, cut off, NU & test wellhead. Clean pits and release rig.

SCHEDULE

Location preparation is presently scheduled to begin on or about August 15, 2004

Drilling operations are anticipated to begin on or about December 1, 2004

end

Wolverine Federal #18-1

The Wolverine Federal #18-1 well site is located approximately 4.2 miles southeast of the town of Sigurd in Township 23 South - Range 1 West, Section 18: Southeast Quarter of the Southeast Quarter (SE/SE) Salt Lake Base and Meridian in Sevier County, Utah.

The proposed Wolverine Federal #18-1 is situated adjacent to Highway 24 in a gentle rolling plains with hilly terrain on the west side. Plant habitat types within the area consist of a combination of Pinyon Pine– Juniper, located on the hillsides, and sagebrush – grass communities in the less gradient areas.

THE PROPOSED ACTIONS

The proposed depth is 7,250 feet for the Wolverine Federal #18-1 well. The well pad dimensions will be approximately 300 feet by 325 feet. The access road was constructed by initially using fill material and covering it with approximately 8 inches of shale/gravel. Another layer of road base material, approximately 4 inches in depth, will be placed on top of the shale/gravel.

WILDLIFE AND VEGETATIVE SPECIES OF CONCERN

Potential effects concerning federally endangered, threatened, proposed, candidate, sensitive, and management indicator wildlife and vegetative species has been evaluated in the proposed area of disturbance before any surface disturbing activities have occurred. It is understood that these activities and the proposed location will be monitored by a BLM staff or approved biologist. A habitat analysis has been completed to evaluate which species may occur in the area. Surface use guidelines will be followed as will surface use restrictions and time limit stipulations in the area of concern for all affected species.

It is understood that the Wolverine Federal #18-1 well site is situated within a designated critical deer wintering range. Proposed activities are not anticipated to occur during any such wintering range seasonal restrictions. There is also the possibility that small clumps of Penstemon plants may be located within this project area. Wolverine Gas and Oil Company of Utah, LLC will take all necessary steps to protect the species of concern and as stipulated by the Bureau of Land Management.

CONFIDENTIAL

**Cultural Resource Inventory of A Well Pad and Access Route Near Sigurd, Sevier
County, Utah**



**Jason Bright
Mountain States Archaeology
7190 South State Street
Midvale, Utah 84047**

**Project Number U-04-MV-0262b
BLM Permit UT0380011**

April 5, 2004

Cultural Resource Inventory of A Well Pad and Access Route Near Sigurd, Sevier County, Utah

Project Description

In March 2004, Western Land Services contracted Mountain States Archaeology to perform Class III cultural resource inventory of a small well pad and access route in Sevier County, Utah on behalf of Wolverine Oil and Gas.

The well pad and access route are located in Township 23 South Range 1 West, SW Section 17 (Figure 1). A records search was performed for this project on March 2, 2004 at Utah SHPO. Upon returning the BLM Project Authorization, Craig Harmon at the Richfield BLM office forwarded records search information on March 26th, 2004. Fieldwork was completed March 28th 2004.

Records Search

The SHPO records search found no previously completed inventories or previously recorded sites within one mile of the well pad. The records search information provided by Craig Harmon (Richfield Field Office, BLM) found only U89BL464 which was the Sigurd/Kings Meadow Power Line. No sites were found on this project.

Methods

The parcel and access route were staked out prior to fieldwork. A crew of two inventoried the access route with one individual walking its staked centerline from Highway 24 to the well pad with another individual 15 meters south and west of the centerline, and walked back to the road along the centerline with an individual 15 meters to the north and east. Thus, the centerline was walked twice and the remainder of the corridor was walked once. The well pad was inventoried with the same crew of two individuals in parallel transects 15 meters apart. Upon completion, the boundary of the well pad was walked with a GPS unit to produce the map in Figure 1. The crew used a Trimble GeoXM.

Environment

The project location is located just west of highway 24, approximately 4 miles south of Sigurd, Utah. Ground visibility was good within the well pad and along the access route. Two steep drainages cut the parcel along its eastern and southern boundaries. Vegetation is composed of sagebrush with various bunch grasses and forbs. Sediments are a light brown sand and silt.

Results

No cultural resources were located within the well pad or access route. This includes archaeological sites and isolated finds.



August 5, 2004

Utah Division of Oil, Gas & Mining
1594 W. N. Temple Suite 1210
Salt Lake City, Utah 84114-5801

RE: Wolverine Gas & Oil Company of Utah, LLC requests permission to drill the
Wolverine Federal #18-1 well as an exception to Rule R649-3-3

Gentlemen:

Pursuant to Rule R649-3-3 of the State's Oil & Gas Conservation regulations, Wolverine Gas & Oil Company of Utah, LLC, hereby makes application for approval to directionally drill an oil & gas well.

Wolverine Gas & Oil Company of Utah, LLC (Wolverine) proposes to drill the Wolverine Federal #18-1 well to a total depth of 7,250 feet. Wolverine is the only operator within a 460 foot radius.

The mountainous terrain of the area is such that directional drilling is the most effective method to minimize surface disturbance. By locating the well pad on a relatively flat surface and drilling a directional well beneath this challenging topography, Wolverine can most effectively minimize surface disturbance and ensure proper utilization of resources.

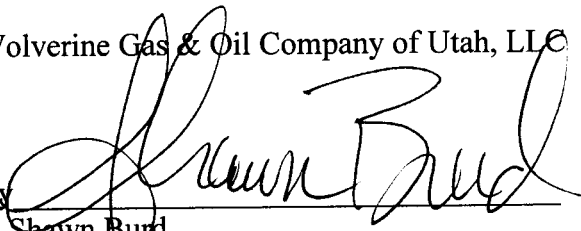
Attached hereto is a plat as required by the Commissions rules and regulations.

If no objections are filed, the applicant requests that this application be approved. If objections are filed, applicant requests the matter be set for hearing and that it be advised of the hearing date.

Respectfully submitted,

Wolverine Gas & Oil Company of Utah, LLC

By


Shawn Burd

Authorized Agent

WESTERN LAND SERVICES - UTAH

310 South 100 East • Richfield, UT 84701 • Phone: (435) 896-1943 • Fax: (435) 893-2134

Web: www.westernls.com

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

CONFIDENTIAL

FORM 3

 AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL				5. MINERAL LEASE NO. UTU-73528	6. SURFACE <i>Federal</i>
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
B. TYPE OF WELL: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> OTHER _____ SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>				8. UNIT or CA AGREEMENT NAME: Wolverine Fed. Exploration Unit	
2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC				9. WELL NAME and NUMBER: Wolverine Federal # 18-1	
3. ADDRESS OF OPERATOR: One Riverfront Plaza CITY Grand Rapids STATE MI ZIP 49503			PHONE NUMBER: (616) 458-1150	10. FIELD AND POOL, OR WILDCAT: Wildcat	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 845' FSL & 1,922' FWL - T23S-R1W, Sec 17 <i>SE SW</i> AT PROPOSED PRODUCING ZONE: 660' FSL & 660' FEL - T23S-R1W, Sec 18 <i>SE SE</i>				11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 18 23S 1W	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 4.2 mile South of Sigurd				12. COUNTY: Sevier	13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) appr. 400'		16. NUMBER OF ACRES IN LEASE 8,236 ac		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) appr. 20'		19. PROPOSED DEPTH: 7,250		20. BOND DESCRIPTION: BLM # WY 3329	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): GR-5,835'		22. APPROXIMATE DATE WORK WILL START: 9/15/2004		23. ESTIMATED DURATION: 40 days	

24.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
20	14	80	Conductor
12 1/2	9 5/8 36 ppf J55 STC	1,510	lead:c,360sx, 1.78, 12.8/tail:g, 280sx,1.20, 15.6
8 3/4	5 1/2 17 ppf L80 LTC	7,250	lead:Poz,750sx,1.76, 13.0/tail:Poz, 350sx,1.49, 13.4

25.

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- ☒ WELL FLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
☒ COMPLETE DRILLING PLAN
☒ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Richard Moritz TITLE Vice President, Land & Legal

SIGNATURE *Richard Moritz* **Approved by the** 7-26-04

(This space for State use only)

API NUMBER ASSIGNED: 43-041-30031

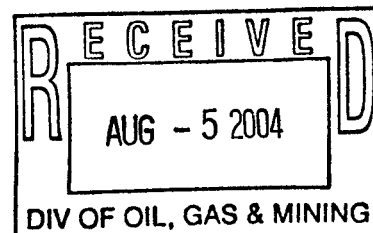
Surf 418906X
4294493Y
38.79733
- 111.93382

(11/2001)

Date: 08-19-04
By: *[Signature]*

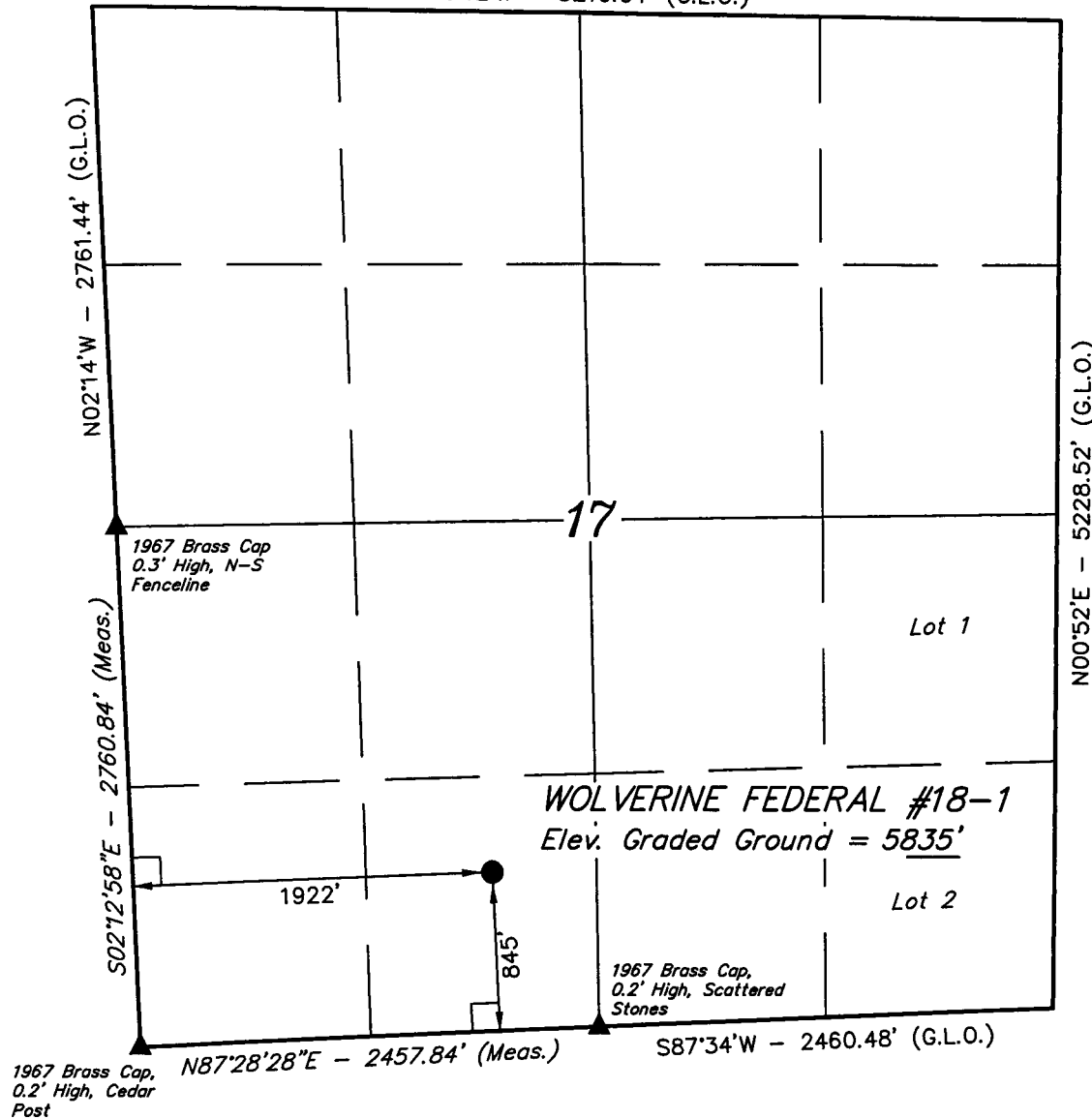
(See Instructions on Reverse Side)

BHL 418119X 38.79674
4294436Y -111.94287



T23S, R1W, S.L.B.&M.

N89°12'W - 5210.04' (G.L.O.)



LEGEND:

- └─ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

BASIS OF BEARINGS

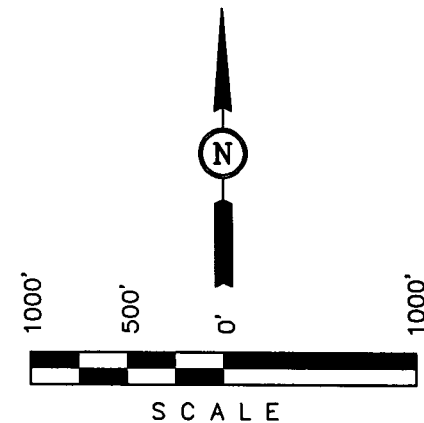
BASIS OF BEARINGS IS A G.P.S. OBSERVATION.
(AUTONOMOUS NAD 83)
LATITUDE = 38°47'51.23" (38.797564)
LONGITUDE = 111°56'05.10" (111.934750)

WOLVERINE GAS & OIL CORP.

Well location, WOLVERINE FEDERAL #18-1, located as shown in the SE 1/4 SW 1/4 of Section 17, T23S, R1W, S.L.B.&M., Sevier County, Utah.

BASIS OF ELEVATION

SPOT ELEVATION LOCATED NEAR A ROAD IN THE SW 1/4 OF SECTION 17, T23S, R1W, S.L.B.&M., TAKEN FROM THE SIGURD QUADRANGLE, UTAH, SEVIER COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5774 FEET.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED SURVEYOR
ROBERT L. KAY
REGISTRATION NO. 14319
STATE OF UTAH

REVISED: 7-7-04
REVISED: 5-27-04

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST - VERNAL, UTAH 84078
(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 3-4-04	DATE DRAWN: 3-10-04
PARTY G.O. D.J. C.G.	REFERENCES G.L.O. PLAT	
WEATHER COOL	FILE WOLVERINE GAS & OIL CORP.	

PROJECT PLAN OF DEVELOPMENT AND MASTER SURFACE USE PLAN

Wolverine FEDERAL #18-1

NAME OF APPLICANT: Wolverine Gas and Oil Company of Utah,
LLC
One Riverfront Plaza, 55 Campau NW
Grand Rapids, Michigan 49503-2616

PROJECT NAME: "Wolverine Federal #18-1"
SE/SE of Section 18
Township 23 South – Range 1 West

ATTACHMENTS: A.) Project Map/Survey
B.) Well Site Location Layout
C.) Cross Sections (Cut and Fill)
D.) Wildlife & Vegetative Species of
Concern Summary
E.) Cultural Resource Survey Report

I. DESCRIPTION OF PROJECT:

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) proposes to drill and explore for hydrocarbons, using a directional drilling program, from the Navajo Formation at depths of approximately 4,810' – 7,036' and approximately 8,062' – 9,100' within the Wolverine Federal Exploration Unit situated in Sevier County, Utah:

TOWNSHIP 23 SOUTH, RANGE 1 WEST

Southeast Quarter of Southeast Quarter (SE/SE) of Section 18

Well Name & No. Target Elev. Location TD Footages

LEASE#UTU-73528					
Wolverine Federal #18-1	Navajo 1 and 2	5,835'	SESE Sec 18, T23S-R1W	7,250'	850' FSL; 1,916' FWL

The attached Project Map (Attachment A) indicates the proposed well site and its intended configuration. Additionally, the existing access route is indicated. This well is being drilled within the "Wolverine Federal Exploration Unit" and upon federally owned surface administered by the Bureau of Land Management, United States Department of the Interior.

Mineral rights within the Wolverine Federal Exploration Unit are owned by a variety of interests and are federally owned at the target bottom-hole location for this proposed well. The proposed surface plan will be reviewed and inspected by the appropriate regulatory agencies, state and federal, to ensure proper utilization of the surface reflecting an effort by Wolverine to minimize surface disturbance and waste. Appropriate Onshore Oil and Gas Orders and those of the Utah Division of Oil, Gas and Mining will be followed in the constructing, drilling, completion, operation, plugging and surface reclamation of this well.

The project is situated within an area that is referred to by the Utah Division of Oil, Gas and Mining (Statement of Basis, Kings Meadow Ranches 17-1, October 21, 2003) as "... placed in the High Plateaus section of the Colorado Plateau physiographic province in western central Utah. Some people have characterized this area as being in the Basin and Range – Colorado Plateau transition zone." The drill site itself is located in a flat area between steep hills and is contiguous to Highway 24 from which access to this site will be established. The flat area is dominated by sagebrush – grass communities and the nearby hillsides are dominated by Pinyon Pine – Juniper communities. The access route consists of an improved driveway off from Highway 24 entering onto the existing well site. BLM road construction standards will be adhered to as new improvements are constructed.

Wolverine's proposed "Wolverine Federal #18-1" project is most easily accessible from Sigurd, Utah. From Sigurd, one would drive down Highway 24 heading east/southeasterly. At mile marker 14, drive approximately 0.2 miles and turn westerly onto the access road heading onto the well site. Drive approximately 100 yards to the proposed well pad location.

Surface water is located in the area primarily in the form of the Sevier River, in the Peterson Creek drainage, a tributary of Brine Creek. Local springs arising from the volcanic rocks and ephemeral drainages also exist in the area including a drainage way

situated along Highway 24. The Sevier River is approximately three (3) miles west of this proposed location.

Geology and Soil Types

Again quoting from the "Division of Oil, Gas and Mining, Statement of Basis, Kings Meadow Ranches 17-1", the well "...will likely spud into a thin alluvium covering the evaporate-rich Jurassic age Arapien shale." "The Arapien Shale may have been somewhat intruded or elevated into the area between the Sevier Fault and the considerable parallel secondary faulting mapped in the Cedar Mountain – Black Mountain area..." It is anticipated that from surface to approximately 400 feet in depth, the lithology of the Quaternary will consist of unconsolidated sediments.

The soil type classified at the Wolverine Federal #18-1 wellsite is the Billings silty clay loam. This soil type is a fine-silty, mixed calcareous, mesic Typic Torrifluvents and is usually found in areas containing two (2) to five (5) percent slopes. The soil is a deep, drained, silty clay loam. It features a light gray, moderately alkaline, strongly calcareous, silty clay loam surface soil that is approximately ten (10) inches thick. The subsoils consist of a light gray, moderately alkaline, friable, silty clay loam approximately 32 inches thick. The substrate material is a light gray, moderately alkaline, friable, silty clay loam with a small amount of gypsum veining.

Assuming that the drilling and completion of this well results in its ability to commercially produce hydrocarbons, appropriate market connections will be made upon proper permitting of such activities by all agencies having jurisdiction over said activities.

II. SOIL EROSION CONTROL MEASURES:

The well pad was sloped at about 1%, in the direction of the site's drainage so as to provide for a well-drained work area during drilling operations. Appropriate collection and infiltration basins were constructed in the sloped area of the drill pad.

In all fill areas, the edges were diked to control run off.

Appropriate drill site drainage and sedimentation control measures were incorporated in the operational plan. These included utilization of earthen dikes along the fill portion of the drilling pad perimeter, stabilization of slopes as needed, location of the reserve pits in the cut portion of the drilling pad and the pad constructed so as to slope toward a collection and infiltration basin. Construction of the drill site was in accordance with the regulations and stipulations as defined by the State of Utah, Department of Natural Resources, Division of Water Rights.

Reclamation of the site was in accordance with Best Management Practices and requirements of the Bureau of Land Management.

III. EXISTING ACCESS ROADS AND ROAD IMPROVEMENTS

The existing access road is identified and labeled on the project map. Steep, rough topography is not identified as a problem along our access route which was constructed by initially using fill material and covering it with approximately eight (8) inches of shale/gravel. Another layer of road base material, approximately four (4) inches in depth, was placed on top of the shale/gravel.

IV. LOCATION OF EXISTING WELLS

The recently drilled "King Meadow Ranches 17-1" well is situated approximately one-half mile northerly of this proposed well site location and is situated in the Southeast Quarter of the Northwest Quarter (SE/NW) of Section 17, Township 23 South, Range 1 West, Sevier County, Utah. "Wolverine Federal 17-2" is located approximately 19.2 feet southwesterly of this proposed well site and is situated in the Southeast Quarter of the Southwest Quarter (SE/SW) of Section 17, Township 23 South, Range 1 West, Sevier County, Utah.

V. DRILLING METHOD

Wolverine proposes to use a directional drilling program for the Wolverine Federal #18-1. The mountainous terrain of the area is such that directional drilling is the most efficient method to minimize surface disturbance. By locating the well pad on a relatively flat surface, and drilling a directional well beneath this challenging topography, Wolverine can most effectively minimize surface disturbance and ensure proper utilization of resources.

VI. LOCATION AND TYPE OF WATER SUPPLY

Water for drilling the Wolverine Federal #18-1 will be purchased from water wells nearby or drilled on location and pumped into storage tanks at the site. Water for drilling from nearby well(s) will be hauled to or pumped on location and stored in storage tanks on the drill site. Wastewater will not be discharged on the surface at this site and the drilling of the well will not require a wastewater management plan.

VII. CONSTRUCTION MATERIALS

In most circumstances, natural earth materials were used for the construction of roads and fills. These were taken from locations essentially contiguous to or nearby the locations to be improved. When necessary, road base materials were used and delivered

by the contractor for application on site and specifically as the initial fill material for the access road, which was then covered with approximately eight (8) inches of shale/gravel.

VIII. METHODS FOR HANDLING WASTE

The Reserve Pit was constructed on the well pad per the attached Well Site Location Layout (Attachment B). It will be used for the disposal of waste mud and drill cuttings and is located on the west/southwesterly portion of the well site plan. The pit dimensions are 125 feet X 225 feet and will be 10 feet deep. The pit was lined with a synthetic liner having a minimum thickness of 12 mills. Rules pursuant to R649-3-16 will be followed regarding the reserve pit as well as those governing Onshore Oil and Gas Operations (43 CFR 3160.)

Upon evaporation of fluids, pit closure occurs with the back fill of soil and its compaction to prevent settling. The usage of the pit is further described in the section VIII under pit closure.

All garbage will be taken off site and disposed of properly. Pursuant to R649-3-14, all rubbish and debris shall be kept in containers on the well site, and will be hauled to an approved disposal site upon completion of drilling and completion operations and as needed during such operations. There will be no chemical disposal of any type. Sewage is handled through the renting of portable toilets. These are serviced by the rental company and removed from site when no longer required.

IX. PLANS FOR RECLAMATION OF THE SURFACE

Pit closure: The pits will be fenced on three sides during all drilling operations and then the fourth side will be immediately fenced when the rig is moved off location. After evaporation of fluids, back-fill of sub-soil and compaction to prevent settling will occur within 90 days of the drilling and completing of the well. If necessary after 90 days, the fluids will be sucked out of the pit and transported off site.

The topsoil was stripped off and stock piled in an area not to be disturbed. The topsoil will be placed back on the pit after back filling and then prepped for re-seeding.

The approximate Pit size is indicated on the Well Site Location Layout diagram attached hereto (Attachment B).

Revegetation Methods: Disturbed areas will be disked, seeded and "dragged", as needed; seeding with a mixture approved by the local USDA Natural Resource Conservation Service or the Bureau of Land Management.

Wolverine generally requires at least twelve (12) pounds per acre of seed distribution. Wolverine suggests that autumn seeding practices be used due to the terrain

in this project area. Spring rain events are common and tend to cause severe run-off. Fall seeding will allow any moisture, whether rain or snow, to assist the seed into the ground.

Other Practices: Other practices that will be utilized to reclaim disturbed areas will include riprap when and if necessary to prevent erosion and the installation of silt fencing in sensitive and/or erosive areas.

Timetable: Reclamation of the surface will commence as soon thereafter construction, drilling and well completion are concluded, as is practicable, depending on weather. In the event of a dry hole, the drill site and roadways will be restored to their original condition as nearly as practicable within 180 days after plugging date of the well.

X. SURFACE OWNERSHIP

The surface of the proposed well site is federally owned and is administered by the Bureau of Land Management, United States Department of Interior.

XI. WELLSITE LAYOUT

Please see the attached "Well Site Location Layout" (Attachment B) for the well configurations.

XII. PIPELINES AND STREAM CROSSINGS

PIPELINES: In the event of hydrocarbon production requiring transmission by pipeline, the proposed pipeline(s) will be designed, constructed, tested, operated and maintained in accordance with standard safety practices and by a combination of construction techniques intended to minimize to the greatest extent practical the impacts upon natural resources.

Pipelines will typically be installed by trenching. In these trenched areas, the contractor shall strip and stockpile topsoil to be replaced over the backfill portion upon completion of construction operations. Silt fencing will be installed at all stream crossings.

The proposed pipelines will be constructed with a combination of methods intended to minimize impacts to private, state and federally owned property, county roads and natural resources. The pipeline will be constructed by a combination of conventional construction techniques and special measures designed to minimize impacts to natural resources. Pipelines will be adequately compacted before the topsoil is replaced for re-seeding.

In general and where required, soil erosion control measures will consist of appropriate BMPs (Best Management Practices) to reduce the potential for erosion. The BMPs that will be utilized in upland areas include use of construction barriers where appropriate, land clearing, spoil piles, staging and scheduling, seeding and mulching. Note that spoil piles will not typically be seeded since exposure of the spoil piles should be minimal in time. All other proper BMP measures will be implemented to reduce the potential for erosion. Seeding of all raw soils after burial of pipe will be performed. However, mulching will be performed only within state or county road right-of-ways.

Generally speaking, in wetlands, appropriate BMPs will be implemented to minimize the potential for soil erosion and point source pollution within wetland construction zones. These measures shall include, but not be limited to, clearing, barriers, staging, filters, silt fencing, spoil piles, dewatering, seeding, and mulching.

XIII. GENERAL

TIMELINE: The following is a general order of construction and sequence of earth change by which our operations will proceed:

- 1.) Access Road and Well Pad Construction
- 2.) Drilling and Well Completion Operations
- 3.) Initial Well Pad Restoration
- 4.) Clearing of Pipeline Rights-of-way (if needed)
- 5.) Delivery and Layout of Pipe
- 6.) Pipe Welding and Inspection
- 7.) Trenching of Pipe
- 8.) Placement and Burying of Pipe
- 9.) Final Restoration of Site/Access/Pipeline Route
- 10.) Re-Seeding

All hillsides, creek banks, and other places where contractor has moved earth to facilitate operations shall be restored to as near original condition as practical. Replaced material and/or backfill will be protected from erosion to the satisfaction of Wolverine, the Bureau of Land Management and the Utah Division of Oil, Gas and Mining without undue delay.

Upon completion of any backfill, contractor shall clear pipeline rights-of-way and access routes of large rocks, stumps and other debris; fill holes, ruts and depressions, and shall keep the access road in a neat and acceptable condition. All cleanup shall be maintained by the contractor until final acceptance by Wolverine and the enforcing agency.

XIV. ENVIRONMENTAL IMPACT ASSESSMENT:

It is anticipated that the drilling and operations planned, provided the success of this well, will not have any adverse affects to any wildlife or aquatic life in the area. There will be only a minor effect on the surface cover. Drilling and production operations should have minimal effect on the population patterns, land use, public utilities or public services in the near future for this rural area.

Noise levels during drilling and completion operations may be continuous but not unusually high. If production is achieved, noise levels should be minimal during the operation and maintenance of the wells.

Necessary soil erosion and sedimentation safeguards will be built into the well pad, access and future proposed pipeline routes to protect any nearby lowlands, where appropriate. Particular care will be exercised in order that all drain ditches be maintained and kept unobstructed to prevent water backup against spoil banks or backfill, causing erosion. The cumulative long-term effect on the immediate environment should be minimal.

If the well is productive, the effect on the air quality in the area is expected to be practically non-existent. Human activity in this area is somewhat limited, due to the nature of the location. Ranching operations and any activities in the area should not be adversely affected.

The site will then be contoured as closely as practical to its natural state, fine graded and stabilized. The well site and access route will be restored as soon as practical. If a well is productive, existing dikes will be maintained and erosion control procedures, as specified and required by the Bureau of Land Management, will be followed to insure protection of the local ecosystem.

Cultural

Please see, "Attachment E", Cultural Resource of A Well Pad and Access Route Near Sigurd, Sevier County, Utah.

Wildlife

Please see "Attachment D", a summary of Wildlife and Vegetative Species of Concern.

XV. SUMMARY:

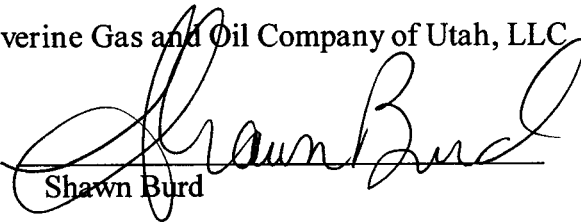
In conclusion, the environmental impact of this project is considered to be minimal and every effort will be made to ensure the protection and preservation of the environment, as well as the standard of living for those affected by its operation.

This proposed project is aimed at increasing the hydrocarbon reserves within the State of Utah. In addition, in the event that production can be established in this project, it will be of financial benefit to the private holders of oil and gas rights within the "Wolverine Federal Exploration Unit", including the Bureau of Land Management in fulfillment of its stewardship responsibilities over federally owned oil and gas assets. We consider the environmental impact of this project to be slight and we will make every effort to be conscientious operators and to insure protection and preservation of the environment during the course of our drilling and producing operations.

Sincerely,

Wolverine Gas and Oil Company of Utah, LLC

By:


Shawn Burd

Authorized Permitting Agent:

Western Land Services – Western Division
54 West Seymour Street
Sheridan, WY 82801
Donald L. Anderson, Chief Operating Officer
Phone: 307-673-1817
Local Contact: Shawn Burd
Phone: 435-896-1943

007

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 08/05/2004

API NO. ASSIGNED: 43-041-30034

WELL NAME: WOLVERINE FED 18-1

OPERATOR: WOLVERINE GAS & OIL CO (N1655)

CONTACT: RICHARD MORITZ

PHONE NUMBER: 616-458-1150

PROPOSED LOCATION:

SESW 17 230S 010W

SURFACE: 0845 FSL 1922 FWL

SESE BOTTOM: 0660 FSL 0660 FEL Sec 18

SEVIER

WILDCAT (1)

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-73528

SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: NAVA

COALBED METHANE WELL? NO

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LATITUDE: 38.79733

LONGITUDE: 111.93382

RECEIVED AND/OR REVIEWED:

☒ Plat
☒ Bond: Fed[1] Ind[] Sta[] Fee[]
(No. WY 3329)
☒ Potash (Y/N)
☒ Oil Shale 190-5 (B) or 190-3 or 190-13
☒ Water Permit
(No. 63-2529)
☒ RDCC Review (Y/N)
(Date:)
☒ Fee Surf Agreement (Y/N)

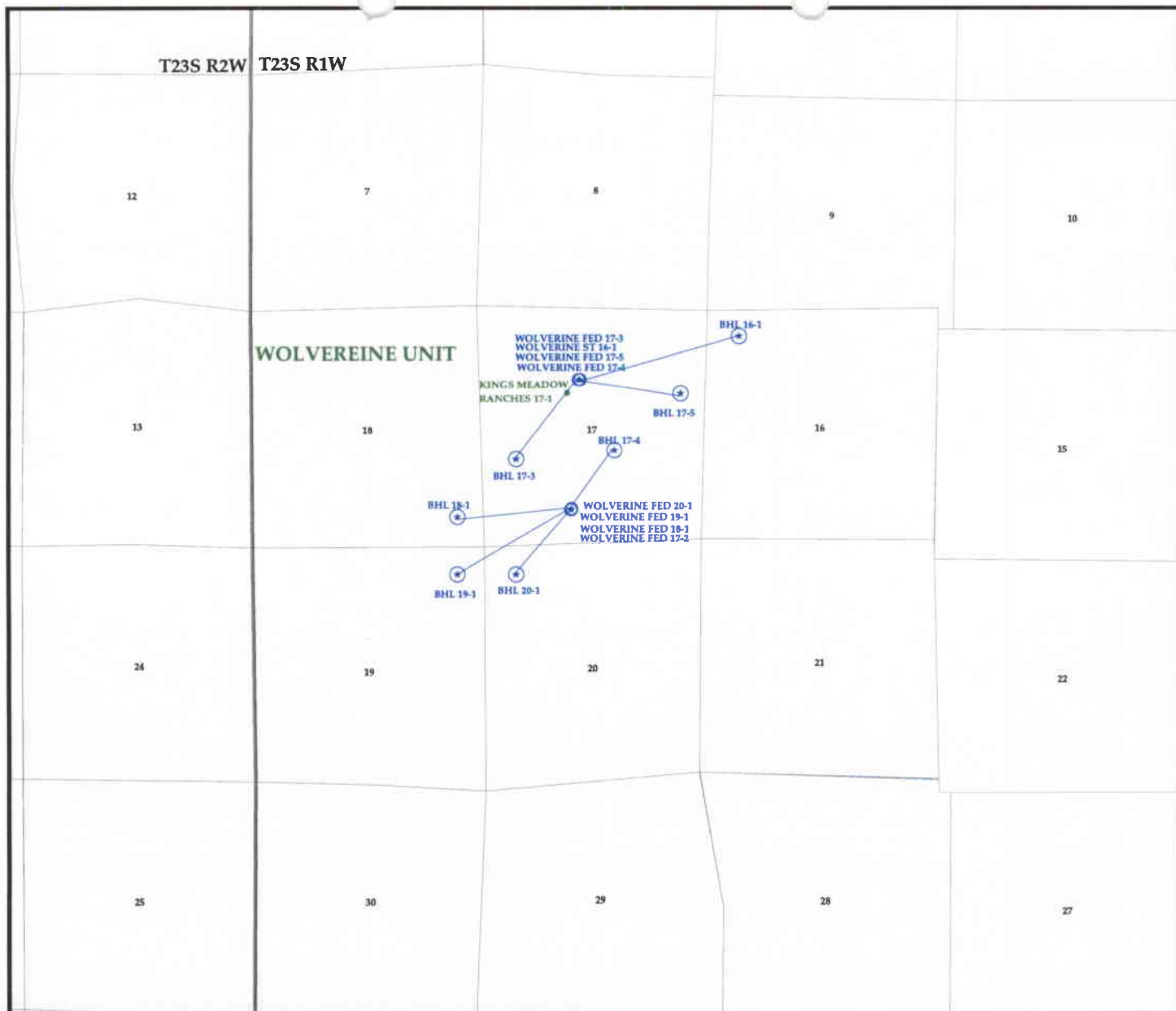
LOCATION AND SITING:

___ R649-2-3.
Unit WOLVERINE
___ R649-3-2. General
Siting: 460 From Qtr/Qtr & 920' Between Wells
___ R649-3-3. Exception
___ Drilling Unit
Board Cause No: _____
Eff Date: _____
Siting: _____
☒ R649-3-11. Directional Drill

COMMENTS:

STIPULATIONS:

1- Federal approval
2- Spacing strip



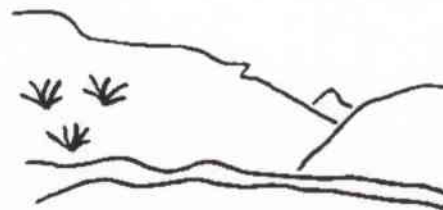
OPERATOR: WOLVERINE G&O CO (N1655)

SEC. 17 T.23S R.1W

FIELD: WILDCAT (001)

COUNTY: SEVIER

SPACING: R649-3-11 / DIRECTIONAL DRILLING

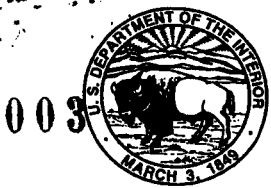


Utah Oil Gas and Mining

Wells	Units.shp	Fields.shp
✂ GAS INJECTION	EXPLORATORY	ABANDONED
✂ GAS STORAGE	GAS STORAGE	ACTIVE
✕ LOCATION ABANDONED	NF PP OIL	COMBINED
⊕ NEW LOCATION	NF SECONDARY	INACTIVE
✧ PLUGGED & ABANDONED	PENDING	PROPOSED
✱ PRODUCING GAS	PI OIL	STORAGE
● PRODUCING OIL	PP GAS	TERMINATED
⊙ SHUT-IN GAS	PP GEOTHERML	
⊙ SHUT-IN OIL	PP OIL	
✕ TEMP. ABANDONED	SECONDARY	
○ TEST WELL	TERMINATED	
▲ WATER INJECTION		
◆ WATER SUPPLY		
✂ WATER DISPOSAL		



PREPARED BY: DIANA WHITNEY
DATE: 12-AUG-2004



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
RICHFIELD FIELD OFFICE
150 East 900 North
Richfield, Utah 84701



In Reply Refer To:

3160
(UT-050)

August 10, 2004

Mr. Richard D. Moritz
Wolverine Gas and Oil Company of Utah, LLC
One Riverfront Plaza
55 Campau NW
Grand Rapids, Michigan 49503

Dear Mr. Moritz:

On July 22, 2004, four Applications for Permit to Drill and on July 28, 2004, three additional Applications for Permit to Drill were filed in this office. These seven wells are Wolverine #17-3, 17-4, 17-5, 16-1, 18-1, 19-1, and 20-1 and are on Federal lease UTU-73528. The well pad locations for these wells are in Section 17, T. 23 S., R. 1 W., SLM, Sevier County, Utah. Your applications have been reviewed for completeness in accordance with the provisions of the Federal regulations and the Onshore Oil and Gas Orders.

Based on Onshore Order 1, with the reference to the appropriate section, the following items are missing or need clarification in your applications:

Section III.G. 3, Form 3160-3 or as an attachment:

- c. Type of drilling tools (rotary or cable).
- d. Casing condition (new or used).

Section III.G. 4. a., Drilling Plan:

- (2) The anticipated contents of each geologic structure or stratum (water, oil, gas or other minerals).
- (3) Pressure control schematic.
- (4) As these are exploratory wells, the design factors for each casing string. (See Onshore Order #2, *Drilling Operations*, III. B. Casing and Cementing Requirements.)

Section III.G. 4. b., Surface Use Program:

- (3) Location of existing wells. For 17-3, 17-4, 17-5, and 16-1, the Location Map does not show the existing Well 17-2. For 18-1, 19-1, and 20-1, the Location Map does not show the existing well 17-1. Are any water wells within the one-mile parameter of the Order? At the proposed well site for 17-3, 17-4, 17-5, and 16-1, three well pads are shown. Two of the pads are assumed to be

the existing well pad (17-1) and the proposed pad (17-3 and others); however, the third pad is not identified.

- (4) Location of proposed production facilities.
- (5) Location of water supply. Be specific as to the source, if it is non-Federal.
- (9) Well site layout. Living facilities and the orientation of the rig and other facilities are not included on a layout.
- (11) Surface Ownership. The surface ownership of the well and access road shall be indicated. Where the surface of the well is privately owned, the operator shall include the name, address, and phone number, if known, of the surface owner. If privately owned, the existence of an agreement between the operator and owner needs to be provided.

All the above items will be necessary before approval can be granted. All other portions of your application are in place, and we will continue to process your application up to the point the missing information prevents further action.

If future applications are filed, we request that Wolverine Gas and Oil adhere closely to Onshore Order No. 1, Section III. G. *Components of a Complete Application for Permit to Drill*. In the order, the Drilling Plan and the Surface Plan items are enumerated for ease of reference during both the preparation and the review of a proposal. All these items are required by regulation, and following the outline in the Order will facilitate the review of your applications. Although some items appear unnecessary or outdated, please provide the information. Unless specifically requested, additional information is unnecessary and may lengthen the review time frames.

In addition, the Application for Permit to Drill package does not need to be filed in a binder for the BLM. BLM records are kept in a file folder, so we remove the binder for ease of filing for our record keeping.

If you have any questions, please contact Michael Jackson at (435) 896-1522. Technical questions on the Drilling Plan may be directed to Al McKee at (801) 539-4045.

Sincerely,



Gary L. Hall
Assistant Field Manager

cc: Western Land Services, 54 West Seymour Street, Sheridan, Wyoming 82801

004

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

August 16, 2004

Memorandum

To: Field Office Manger, Richfield Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2004 Plan of Development Wolverine Unit Sevier County,
Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2004 within the Wolverine Unit, Sevier County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ Navajo)		
43-041-30032	Wolverine Federal	20-1 Sec 17 T23S R01W 0833 FSL 1925 FWL
	BHL	Sec 20 T23S R01W 0660 FNL 0660 FWL
43-041-30033	Wolverine Federal	19-1 Sec 17 T23S R01W 0857 FSL 1919 FWL
	BHL	Sec 19 T23S R01W 0660 FNL 0660 FEL
43-041-30034	Wolverine Federal	18-1 Sec 17 T23S R01W 0845 FSL 1922 FWL
	BHL	Sec 18 T23S R01W 0660 FSL 0660 FEL
43-041-30035	Wolverine Federal	17-4 Sec 17 T23S R01W 1736 FNL 2298 FWL
	BHL	Sec 17 T23S R01W 1980 FSL 1980 FEL
43-041-30036	Wolverine Federal	17-3 Sec 17 T23S R01W 1736 FNL 2283 FWL
	BHL	Sec 17 T23S R01W 1980 FSL 0660 FWL
43-041-30037	Wolverine State	16-1 Sec 17 T23S R01W 1736 FNL 2253 FWL
	BHL	Sec 16 T23S R01W 0660 FNL 0660 FWL
43-041-30038	Wolverine Federal	17-5 Sec 17 T23S R01W 1736 FNL 2268 FWL
	BHL	Sec 17 T23S R01W 1980 FNL 0660 FEL



August 18, 2004

Utah Division of Oil, Gas & Mining
1594 W. N. Temple Suite 1210
Salt Lake City, Utah 84114-5801

RE: Wolverine Gas & Oil Company of Utah, LLC requests permission to drill the
Wolverine Federal #18-1

Gentlemen:

Pursuant to Rule R649-3-11 of the State's Oil & Gas Conservation regulations, Wolverine Gas & Oil Company of Utah, LLC, hereby makes application for approval to directionally drill an oil & gas well.

Wolverine Gas & Oil Company of Utah, LLC (Wolverine) proposes to drill the Wolverine Federal #18-1 well to a total depth of 7,250 feet and is an exception to Rule R649-3-3. Wolverine is the only leasehold operator within a 460 foot radius of the bore hole.

The mountainous terrain of the area is such that directional drilling is the most effective method to minimize surface disturbance. By locating the well pad on a relatively flat surface and drilling a directional well beneath this challenging topography, Wolverine can most effectively minimize surface disturbance and ensure proper utilization of resources.

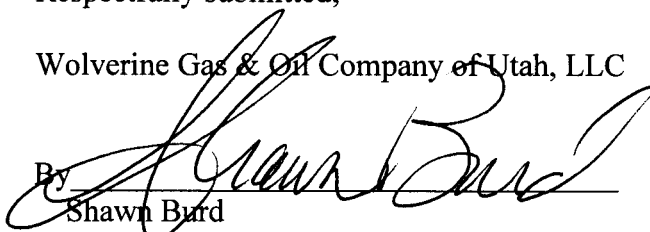
Attached hereto is a plat as required by the Commissions rules and regulations.

If no objections are filed, the applicant requests that this application be approved. If objections are filed, applicant requests the matter be set for hearing and that it be advised of the hearing date.

Respectfully submitted,

Wolverine Gas & Oil Company of Utah, LLC

By


Shawn Burd

Authorized Agent

RECEIVED
AUG 19 2004

DIV. OF OIL, GAS & MINING

WESTERN LAND SERVICES - UTAH

310 South 100 East • Richfield, UT 84701 • Phone: (435) 896-1943 • Fax: (435) 893-2134

Web: www.westernls.com



State of Utah

Department of
Natural ResourcesROBERT L. MORGAN
*Executive Director*Division of
Oil, Gas & MiningLOWELL P. BRAXTON
*Division Director*OLENE S. WALKER
*Governor*GAYLE F. McKEACHNIE
Lieutenant Governor

August 19, 2004

Wolverine Gas & Oil Company of Utah, LLC
One Riverfront Plaza
Grand Rapids, MI 49503Re: Wolverine Federal 18-1 Well, Surface Location 845' FSL, 1922' FWL, SE SW,
Sec. 17, T. 23 South, R. 1 West, Bottom Location 660' FSL, 660' FEL, SE SE,
Sec. 18, T. 23 South, R. 1 West, Sevier County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-041-30034.

Sincerely,

for John R. Baza
Associate Directorpab
Enclosurescc: Sevier County Assessor
Bureau of Land Management, Moab District Office

Operator: Wolverine Gas & Oil Company of Utah, LLC
Well Name & Number Wolverine Federal 18-1
API Number: 43-041-30034
Lease: UTU-73528

Surface Location: SE SW **Sec.** 17 **T.** 23 South **R.** 1 West
Bottom Location: SE SE **Sec.** 18 **T.** 23 South **R.** 1 West

Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dan Jarvis at (801) 538-5338

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

6. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

009

**WOLVERINE GAS AND OIL COMPANY**
of Utah, LLC*Energy Exploration in Partnership with the Environment*

January 28, 2005

T. 23S, R. 1W, S. 17

State of Utah
Division of Oil, Gas & Mining
1594 West North Temple
Suite 1210
Salt Lake City, UT 84114-5801

Via Fax (801) 359-3940

Re: Approved APDs
Wolverine Federal 18-1, 19-1 & 20-1

To Whom It May Concern:

Wolverine Gas and Oil Corporation of Utah, as operator of the captioned wells (API Nos. 43-041-30032, 43-041-30033 and 43-041-30034), hereby requests copies of the approved Applications to Drill with any conditions for approval for said wells. Please fax them to my attention at (616) 458-0869.

If you have any questions or concerns, please feel free to contact me.

Very truly,

Sue A. Benson

RECEIVED

JAN 28 2005

DIV. OF OIL, GAS & MINING



Wolverine Gas and Oil Corporation

WOLVERINE GAS AND OIL CORPORATION

One Riverfront Plaza, 55 Campau NW
Grand Rapids, Michigan 49503-2816Telephone: 616.458.1150
Fax: 616.458.0889RECIPIENT: Vicky DysonUDOGM

FROM:

Sue Benson

DATE:

1-28-05

TIME:

9:45 AM

MATERIALS SENT:

Letter

FAX NO.:

(800) 359-3940

NUMBER OF PAGES (including this cover sheet):

2

IF TRANSMISSION IS INCOMPLETE, PLEASE CALL

Sue

AT 616.458.1150.

COMMENTS, IF ANY:

CONFIDENTIALITY NOTICE

THIS FACSIMILE TRANSMISSION AND ANY ACCOMPANYING DOCUMENTS CONTAIN INFORMATION BELONGING TO THE SENDER WHICH MAY BE CONFIDENTIAL AND LEGALLY PRIVILEGED. THIS INFORMATION IS INTENDED ONLY FOR THE USE OF THE RECIPIENT TO WHOM THIS FACSIMILE TRANSMISSION WAS SENT AS INDICATED ABOVE. IF YOU ARE NOT THE INTENDED RECIPIENT, ANY DISCLOSURE, COPYING, DISTRIBUTION, OR ACTION TAKEN IN RELIANCE ON THE CONTENTS OF THE INFORMATION CONTAINED IN THIS FACSIMILE TRANSMISSION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS INFORMATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE AND RETURN THE ORIGINAL MESSAGE TO US VIA THE U.S. POSTAL SERVICE. WE WILL BE HAPPY TO REMIT THE POSTAGE COST BACK TO YOU.

RECEIVED

JAN 28 2005

DIV. OF OIL, GAS & MINING

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007**SUNDRY NOTICES AND REPORTS ON WELLS****Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.****SUBMIT IN TRIPLICATE- Other instructions on reverse side.**1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator **Wolverine Gas & Oil Co of Utah, LLC**3a. Address
One Riverfront Plaza, 55 Campau NW, Grand Rapids, MI3b. Phone No. (include area code)
616-458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SHL: 830' FSL & 1901' FWL**BHL: 841' FSL & 1732' FWL (TD)***T-235 R-14 S-19*

5. Lease Serial No.

UTU-73528

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

Wolverine Fed Exploration Unit

8. Well Name and No.

Wolverine Federal #17-2

9. API Well No.

43-041-30031

10. Field and Pool, or Exploratory Area

Exploratory

11. County or Parish, State

Sevier Co, UT**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input checked="" type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other move power plant
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Wolverine anticipates drilling (3) additional wells from the present well pad area beginning in late June 2005. The subject well presently produces via electric submersible pump which requires a diesel generator, fuel tanks, electric transformer, motor control cabinet and other ancilliary equipment. This equipment was moved, on June 18, 2005 from immediately adjacent to the wellhead to an area immediately south of and adjacent to the present well pad to make room for the drilling rig. The area utilized was within the scope of the original well pad area and did not impact additional surface areas.

cc: UDOGM**PLEASE MAINTAIN ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL - thank you**

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Steven R Hash - EXACT Engineering IncTitle **Consulting Engineer (918) 599-9400**

Signature

Steven R. Hash

Date

06/22/2005**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

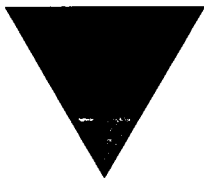
Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

RECEIVED
JUL 08 2005

DIV. OF OIL, GAS & MINING



WOLVERINE GAS AND OIL COMPANY
of Utah, LLC

Energy Exploration in Partnership with the Environment

August 4, 2005

Ms. Diana Whitney
Utah Division of Oil, Gas & Mining
1594 W. N. Temple, Suite 1210
Salt Lake City, UT 84114-5801

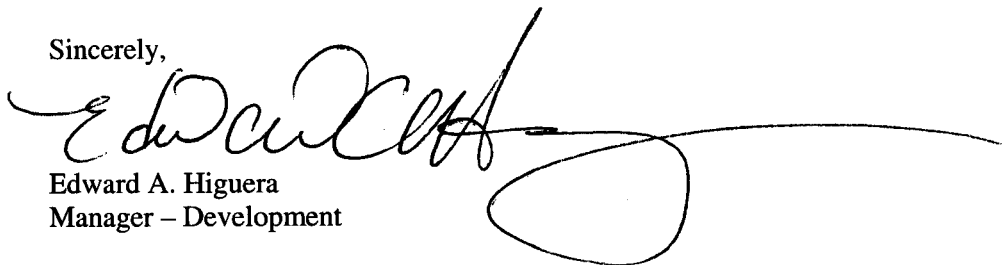
RE: Request for permit extension for the Wolverine Federal #18-1

Dear Ms. Whitney:

Please accept this sundry notice for an extension on our drill permit which is due to expire on August 19, 2005, for the above captioned well.

If you have any questions, please call me at 616-458-1150. Thank you for your attention to this matter.

Sincerely,



Edward A. Higuera
Manager – Development

Enclosure

RECEIVED
AUG 08 2005
DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____	5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528
2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503	7. UNIT or CA AGREEMENT NAME: Wolverine Fed Exploration Unit
PHONE NUMBER: (616) 458-1150	8. WELL NAME and NUMBER: Wolverine Federal #18-1
9. API NUMBER: 4304130034	10. FIELD AND POOL, OR WILDCAT: Exploratory

4. LOCATION OF WELL FOOTAGES AT SURFACE: 845' FSL & 1,922' FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESW 17 23S 1W	COUNTY: Sevier County STATE: UTAH
--	--------------------------------------

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: Request for Permit Extension
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
1. Wolverine requests an one-time one year extension of the Application for Permit to Drill for the Wolverine Federal 18-1 well. We anticipate spudding the Wolverine Federal 18-1 within 40-60 days. This might put us past the term of the existing permit for the Utah Division of Oil, Gas and Mining which expires on August 19, 2005 and, if delays occur, past the term of the existing permit for the Bureau of Land Management which expires on September 23, 2005.

Approved by the
Utah Division of
Oil, Gas and Mining
Date: 08-15-05
By: [Signature]

COPY SENT TO OPERATOR
DATE: 8-16-05
BY: CHD

NAME (PLEASE PRINT) Edward A. Higuera	TITLE Manager Development
SIGNATURE [Signature]	DATE 8/4/2005

(This space for State use only)

RECEIVED
AUG 08 2005
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

**Application for Permit to Drill
Request for Permit Extension
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

API: 43-041-30034
Well Name: Wolverine Federal #18-1
Location: Sec 17, T23S R01W
Company Permit Issued to: Wolverine Gas & Oil Company of Utah, LLC
Date Original Permit Issued: 8/19/2004

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes ☐ No ☒

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes ☐ No ☒

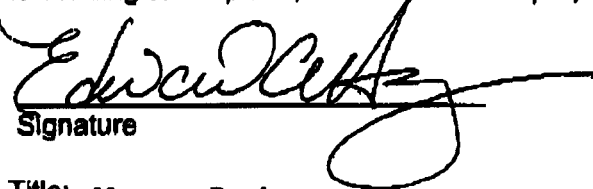
Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes ☐ No ☒

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes ☐ No ☒

Has the approved source of water for drilling changed? Yes ☐ No ☒

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes ☐ No ☒

Is bonding still in place, which covers this proposed well? Yes ☒ No ☐


Signature

Date

8/13/05

Title: Manager - Development

Representing: Wolverine Gas & Oil Company of Utah, LLC

RECEIVED

AUG 15 2005

DIV. OF OIL, GAS & MINING



WOLVERINE GAS AND OIL COMPANY
of Utah, LLC

Energy Exploration in Partnership with the Environment

August 31, 2005

CONFIDENTIAL

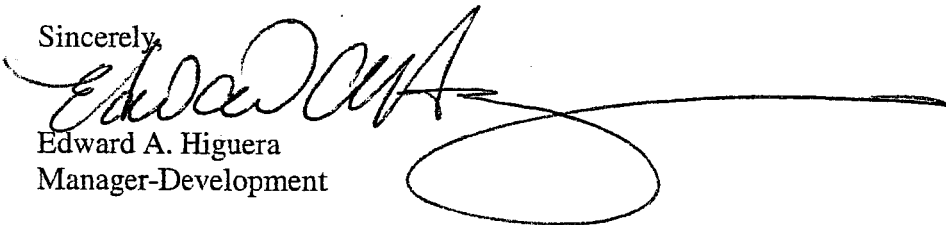
Mr. Al McKee
Bureau of Land Management
Utah State Office
440 West 200 South, Suite 500
Salt Lake City, Utah 84101
RE: Wolverine Federal #18-1
API # 43-041-30034
Sevier County, UT

Dear Mr. McKee:

The enclosed sundry covers the Wolverine Federal #18-1, located in Sevier County, and the following changes: 1) Change in surface location because of different slot designation on the drilling pad (see revised well plat); and 2) Change in casing program so it reflects the current casing program (e.g., 7" production casing instead of 5-1/2"), and which is consistent to previously approved wells. Changes are made to the cement program to fit the new casing program. The changes are summarized on the table included with the sundry.

If you have any questions, please call.

Sincerely,


Edward A. Higuera
Manager-Development

Enclosures

c: Diana Whitney, UDOGM w/attachments
Steve Hash w/attachments

RECEIVED
SEP 01 2005
DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>CONFIDENTIAL</u>		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528
2. NAME OF OPERATOR: Wolverine Gas & Oil Company of Utah, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503		7. UNIT or CA AGREEMENT NAME: Wolverine Fed Exploration Unit
4. LOCATION OF WELL FOOTAGES AT SURFACE: 829' FSL & 1922 FWL, Section 17, T23S, R1W (current loc.)		8. WELL NAME and NUMBER: Wolverine Federal #18-1
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESW 17 23S 1W		9. API NUMBER: 4304130034
COUNTY: Sevier		10. FIELD AND POOL, OR WILDCAT: Covenant Field
STATE: UTAH		

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input checked="" type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Wolverine proposes the changes listed on the attached table to be consistent with current casing program used in the field, and to reflect changes in the surface location because of revisions to slot designation.

See attached summary table, revised plat, revised BOP schematic.

New Surface Location: 829' FSL & 1928 FWL SE/SW Section 17, T23S-R1W
(Latitude: 38.797526250; Longitude: 111.934739194)

418899X 38.797505
4294513Y -111.933901

COPY SENT TO OPERATOR
Date: 09-02-05
Initials: CMO

Federal Approval of this
Action is Necessary

Approved by the
Utah Division of
Oil, Gas and Mining

Date: 08-06-05

By: [Signature]

NAME (PLEASE PRINT) Edward A. Higuera

TITLE Manager-Development

SIGNATURE [Signature]

DATE 8/31/2005

(This space for State use only)

RECEIVED
SEP 01 2005

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0135
Expires January 31, 2004

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
UTU-73528

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Wolverine Gas & Oil Company of Utah, LLC

3a. Address

55 Campau NW, Grand Rapids, MI 49503

3b. Phone No. (include area code)

616 458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface: 845' FSL & 1922' FWL Section 17, T23S-R1W

Bottom hole: 660' FSL & 660' FEL, Section 18, T23S-R1W

7. If Unit or CA/Agreement, Name and/or No.

Wolverine Fed Exploration Unit

8. Well Name and No.

Wolverine Federal #18-1

9. API Well No.

4304130034

10. Field and Pool, or Exploratory Area

Exploratory

11. County or Parish, State

Sevier County, UT

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Wolverine proposes the changes listed on the attached table to be consistent with current casing programs used in the field, and to reflect changes in the surface locations because of revisions of slot designations.

See attached summary table, revised plat and revised BOP schematic.

RECEIVED

SEP 01 2005

DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Edward A. Higuera

Title Manager-Development

Signature

Date August 31, 2005

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

Wolverine Gas & Oil Company of Utah, LLC,
Proposed Changes for Wolverine Federal 18-1

Item	FROM (original Permitted)	TO: (change)	Comment
Surface Location	845 FSL & 1922 FWL, SE/SW Section 17, T23S-R1W	829 FSL & 1928 FWL, SE/SW Section 17, T23S-R1W	Change in slot designation on pad
Bottomhole Location	660' FSL & 660 FEL, Section 18, T23S-R1W	200' FEL & 175 FSL Section 18, T23S-R1W	New BHL based on current mapping
Hole Size	12-1/4"/8-3/4"	17-1/2"/12-1/4"/8-1/2"	Hole size changed to fit new casing program
Casing program	14" conductor to 80' 9-5/8", 36 ppf J-55 at 1510' 5-1/2", 17 ppf L-80 at 7250'	20" conductor to 120' 13-3/8", 61# J-55 at 2000' +/- 9-5/8", 47# N-80 (or HCP-110) at 6225' +/- 7", 26# N-80 (or 23 # HCP-110) at 7350' +/-	
Cement program	9-5/8" Csg: Lead 360 sx, 1.76 yld, 12.8 ppg; Tail: 280 sx, 1.20 yld, 13.4 ppg 5-1/2" Csg: 750 sx, 1.76 yld, 13 ppg; Tail: 350 sx, 1.49 yld, 13.4 ppg	13-3/8" Csg:: Lead 800 sx hi-fill, 3.86 yld, 11 ppg; Tail: 470 sx Prem G, 1.18 yld, 15.8 ppg. 9-5/8" Csg: 350 sx 50:50 Poz, 1.71 yld, 13 ppg 7" Csg: 500 sx 50:50 Poz, 1.27 yld, 14.35 ppg	Cement change to fit casing program
BOP/Surface	14" x 13-5/8" 3M weld on flange 13-5/8" 3M x 13-5/8 3M spacer spool with 3" outlets; 13-5/8" annular preventer, connected to accumulator 13-5/8 drilling nipple with fillup line and circulating line	20" casing with one 7-1/16" flanged outlet with 7-1/16" HCR valve and 6" blooie line to flare pit 20" drilling nipple with fillup line and 10-3/4" flow line w/ flowline valve 20" rotating head	Change to fit new casing program
BOP/productive csg	11" 3M x 9-5/8" csg head 11" 3M x 11" 3M spacer spool 11" 3M double ram preventer w/4-1/2" pipe ram on top and blind ram on bottom; two side outlets, choke side will have 3"x 3M gate valves. Kill side will have two 2-1/16" x 3M gate valves, one 2" x 3M check valve. 11" 3M annular preventer 11" 3M short rotating head w/fill up line	13-5/8" 5M x 13-3/8" SOW casing head w/ (2) 2-1/16" SSO's (for 9-5/8") 13-5/8" 5M x 13-5/8" 5M multi-bowl casing spool (for 7") 13-5/8" 5M x 13-5/8" spacer spool 13-5/8" 5M x 13-5/8" 5M mud cross with (2) side outlets: one outlet 2-1/16" 5M kill line one outlet 3-1/16" 5M choke line 13-5/8" 5M double ram BOP w/ 5" pipe rams top & CSO rams btm 13-5/8" 5M Annular Preventer 13-5/8" 5M rotating head Connect BOP to choke manifold with pressure gauge Upper kelly cock valves with handles available Safety valves and subs to fit all drill string connections in use Inside BOP or float sub available	Change to fit new casing program

Section 17, T.23 S., R.1 W., S.L.B. & M.

PROJECT Wolverine Gas & Oil Company of Utah, LLC.

WELL LOCATION, LOCATED AS SHOWN IN THE SE 1/4 OF THE
SW 1/4 OF SECTION 17, T.23 S., R.1 W., S.L.B. & M.
SEVIER COUNTY, UTAH

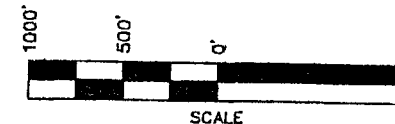
LEGEND

- ⊕ = SECTION CORNERS LOCATED
- ⊕ = QUARTER SECTION CORNERS LOCATED
- ⊙ = PROPOSED WELL HEAD

NOTE: THE PURPOSE OF THIS SURVEY WAS TO PLAT
THE WOLVERINE FEDERAL #18-1 LOCATION.
LOCATED IN THE SE 1/4 OF THE SW 1/4
OF SECTION 17, T.23 S., R.1 W., S.L.B. & M.
SEVIER COUNTY.

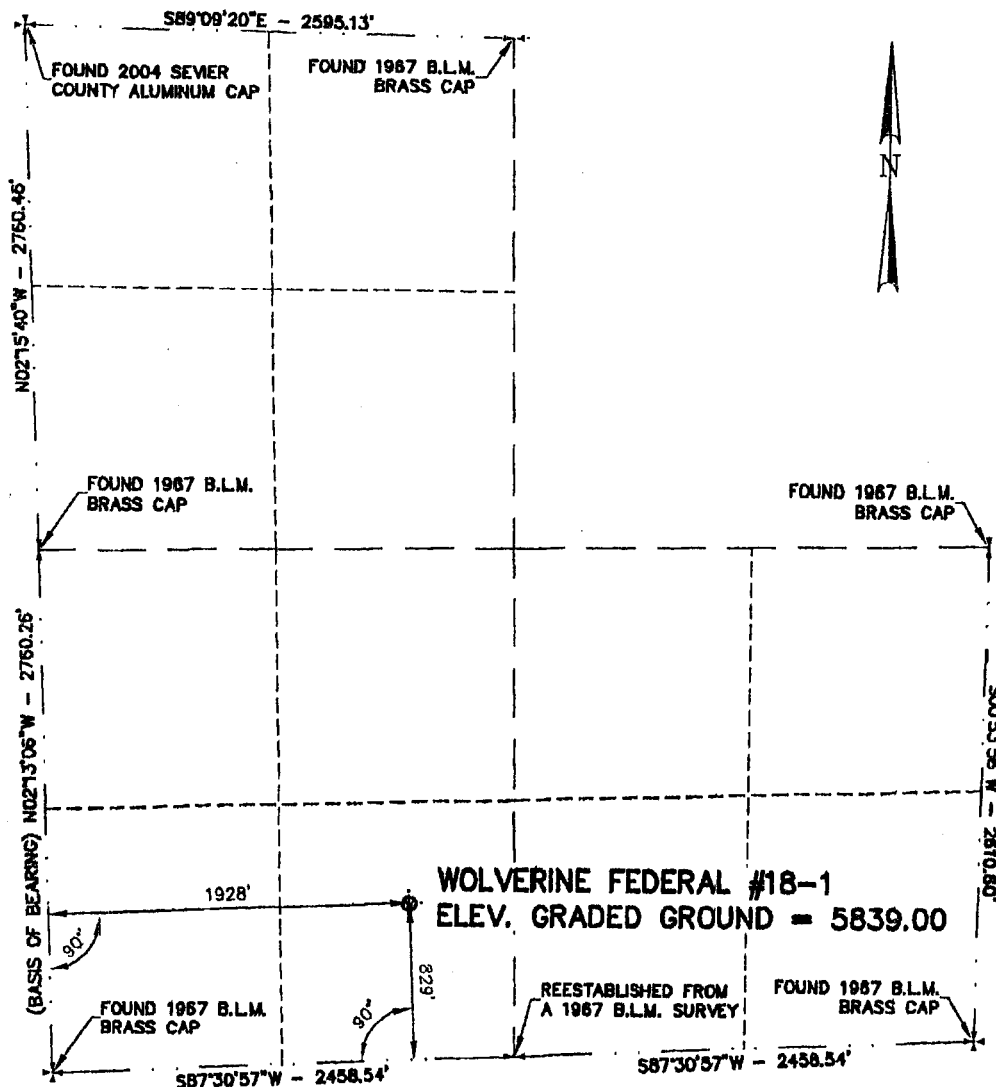
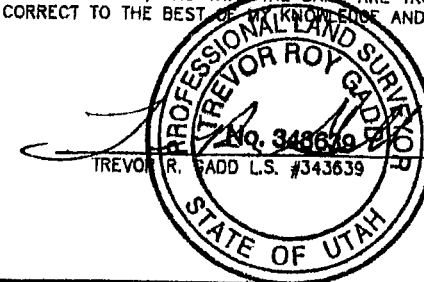
BASIS OF ELEVATION

ELEVATION BASED ON U.S.G.S. BENCH MARK LOCATED IN
THE SW 1/4 OF SECTION 17, T.23 S., R.1 W., S.L.B. & M.



CERTIFICATE

THIS IS TO CERTIFY THAT THIS PLAT WAS PREPARED FROM
FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER
MY SUPERVISION, AND THAT THE SAME ARE TRUE AND
CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



BASIS OF BEARINGS

BASIS OF BEARING USED WAS N02°13'08"W BETWEEN THE SOUTHWEST CORNER
AND THE WEST QUARTER CORNER OF SECTION 17, T.23 S., R.1 W., S.L.B. & M.

LATITUDE = 38°47'51.0945" (38.797526250)
LONGITUDE = -111°56'05.0611" (111.934739194)



Jones & DeMille Engineering
1535 South 100 West - Richfield, Utah 84701
Phone (435) 896-8286
Fax (435) 896-8288
www.jonesanddemille.com

Well Location Plat for

Wolverine Gas & Oil Company of Utah, LLC.

DESIGNED	SURVEYED	CHECKED	DRAWN	PROJECT NO.	SHEET NO.
	T.W.G.	T.R.G.	K.B.B.		
DATE		DRAWN	SCALE		
08/03/05		B. Wells	1" = 1000'	0505-053	1

PRESSURE CONTROL SYSTEM SCHEMATIC

Prepared by:
EXACT Engineering, Inc
Tulsa, OK (918) 599-9400

Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Wolverine Federal #18-1

5M BOP Stack --- to be utilized while drilling holes for protective and production casings thru lower Arapien, Twin Creek & Navajo intervals

Max. anticipated surface pressure 3000 psi

Annular B.O.P. 13-5/8" - 5M WP

B.O.P. 5" pipe Rams 13-5/8" - 5M W.P.
(Pipe/Blind)

B.O.P. blind Rams 13-5/8" - 5M W.P.
(Pipe/Blind)

Check Valve 2-1/16" 5M WP

Valve 2-1/16" 5M WP

Valve 2-1/16" 5M WP

Valve 3-1/16" 5M WP

Valve 3-1/16" 5M WP

Kill Line Manifold

Manifold Line

Line 3-1/16" 5M WP

Spool 13-5/8" 5M x 13-5/8" 5M x 2-1/16" x 3-1/16" 5M outlets

Wellhead 13-5/8" 5M x 13-5/8" 5M multibowl
w/ 13-5/8" 5M x 13-3/8" 5M SOW csg head

B.O.P.
Manual
☒ Hydraulic
Sour Trim

Ground level

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC

DRILLING PROGNOSIS

Wolverine Federal # 18-1
SE SW SEC 17-T23S-R1W
SEVIER CO., UTAH

BRIEF DRILLING PLAN

Due to surface topography constraints, directionally drill a 7350' MD (6800' TVD) test of the Navajo 1 formation on a day work contract basis from Wolverine's present work area known as Drill Pad B1(d) located in SE SW of Sec 17 T23S – R01W, Sevier Co, UT. Please refer to the directional drilling plan attached for detailed hole angle, trajectory and target information. Deviation is the primary drilling concern in this area. No abnormal pressure or hydrogen sulfide gas is expected, however, an H2S detector will be utilized. The projected surface and bottomhole locations are to be as follows:

Surface Location: 829' fsl & 1928' fwl of Sec 17 T23S – R01W
BHL @ top of NVJO1 (6200' TVD) 175' fsl & 200' fel of Sec 18 T23S – R01W

20" conductor casing will be cemented to surface at approximately 120 ft BGL. 13-3/8" surface csg will be set & cemented to surface in a 17-1/2" hole deviated to approximately 29 deg at +/- 2050' MD (+/- 2000' TVD). A 12-1/4" hole will then be drilled to +/- 6225' MD (5690' TVD) maintaining an approximate 29 deg tangent section to 5500'. 9-5/8" protective casing will be set from surface to 12-1/4" TD of 6225' & cemented over the lower 1000'. An 8-1/2" hole will then be drilled returning to vertical by +/- 6500' (5950' TVD). Total depth will be +/- 7350' (6800' TVD). 7" production casing will be run from TD back to surface & cemented to approximately 800' into the 9-5/8" protective casing.

EMERGENCY NUMBERS

Sevier Valley Medical Center	(435)-896-8271
Medical Helicopter	(800)-453-0120
Sheriff Department	(435)-896-2600
Fire Department-Richfield, UT	(435)-896-5479
Bureau of Land Management (Richfield):	(435)-896-1500
Bureau of Land Management (Salt Lake City)	(801) 539-4045
Utah Division of Oil, Gas and Mining (Salt Lake City):	(801)-538-5340

United States Bureau of Land Management

Contact Al McKee (801) 539-4045 24 hrs prior to spudding

Utah Division of Oil, Gas and Mining

Contact Carol Daniels (801) 538-5284, 24 hrs prior to spudding

GENERAL INFORMATION

OBJECTIVE: Navajo 1 @ 5950' (TVD) **ELEVATION:** 5839' GL (est) 5856' KB

PROJECTED TOTAL DEPTH: 7350' MD; 6800' TVD

SURFACE LOCATION: 829' FSL & 1928' FWL
Section 17-23S-1W

COUNTY: Sevier **STATE:** Utah

DIRECTIONS TO LOCATION: From the town of Sigurd, Utah go south
approximately 4 miles on Hwy #24 to location on
the right side of the road.

PROPOSED CASING PROGRAM:

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Measured Depth Set
30"	20"	.25 wall	X42	PE welded	120'
17-1/2"	13-3/8"	61#	J-55	STC	0'-2000'
12-1/4"	9-5/8"	* 47#	N-80	LTC	0'-6225'
8-1/2"	7"	** 26#	N-80	LTC	0' -7350'

* due to availability 47# HCP-110 may be substituted for N80

** due to availability 23# HCP-110 may be substituted for 26# N80

Hole Size	Casing Size	Drift ID, in.	OD of Couplings	Annular Volume in OH, cf/ft	Annular Volume in Csg, cf/ft	Capacity of casing, cf/ft
30"	20"	Conductor	Na			
17-1/2"	13-3/8"	12.259	14.375	.6946	1.0982	.8406
12 1/4"	9-5/8"	8.525	10.625	0.3127	0.4659	0.4340
8-1/2"	7"	6.250	7.656	.1268	.1438	.2148

GEOLOGIC FORMATIONS:

Formation	Interval (TVD)	Interval (MD)	Lithology	Prod	Abnormal Psi
Arapien	Surf – 5588'	Surf – 6125'	sh, siltstone,salt,evaporites		
TwinCreek1	5588' - 5956'	6125' - 6496'	Carbonates	X	
Navajo 1	5956' - 6800'	6496' - 7350'	Sandstone w/ minor shale	X	
Total Depth	6800'	7350'			

CONSTRUCTION OF SURFACE LOCATION

360'x 180' Pad

150'x 100' x 10' Reserve Pit with a 12 mil synthetic liner

96" diameter tin horn cellar, 10' deep.

Flare pit a minimum of 100' from wellhead.

SURFACE HOLE: 120' to 2000'

Directionally drill a 17-1/2" hole with a PDC bit, mud motor & MWD equipment to approximately 2000' using salt mud system from prior well (make hole to fit 13-3/8" casing). Loss circulation could be a problem in this interval and, if such occurs, begin pumping LCM sweeps. If loss circulation cannot be healed with ± 25 ppb LCM, consider dry drilling (no returns). Maintain hole angle and direction in keeping with the attached directional plan.

PRESSURE CONTROL & SAFETY EQUIPMENT FOR SURFACE HOLE

Bottom to Top

20" casing with one 7-1/16" flanged outlet with 7-1/16" HCR valve and 6" blooie line to flare pit

20" drilling nipple with fillup line and 10-3/4" flow line w/ flowline valve

20" rotating head

Upper kelly cock valves with handles available

Safety valves and subs to fit all drill string connections in use

Inside BOP or float sub available

MUD PROGRAM FOR SURFACE HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	FLUID LOSS
-------	------------	------	------	------------

120 -2000'	9.6 – 10.2	Salt mud	40-55	N/C
------------	------------	----------	-------	-----

Note: Sweep hole every 100 – 200 feet or as needed for hole cleaning. Maintain maximum flowrates for hole cleaning. Use salt gel and seamud to maintain properties.

CASING PROGRAM FOR SURFACE HOLE

<u>DEPTH</u>	<u>SIZE</u>	<u>LENGTH</u>	<u>WT</u>	<u>GRADE</u>	<u>THREAD</u>	<u>REMARKS</u>
120 - 2000'	13-3/8"	2700'	61#	J-55	ST&C	

Casing Running Sequence:

guide shoe, 1 jt of 13-3/8" 61# J55 ST&C, Float collar, balance of 13-3/8" 61# J55 ST&C, 10 centralizers as reqd. RU cement co., hold safety meeting, test lines, cement 13-3/8" casing per cement company recommendation and the cementing guide below. Displace with fresh water or mud.

CEMENTING PROGRAM FOR SURFACE HOLE

Lead:

800 sx hi-fill

Mixed at: 11.0 ppg
Yield: 3.86 ft³/sx

Tail: 470 sx Premium G

Mixed at: 15.8 ppg
Yield: 1.18 ft³/sx

MUST CIRCULATE CEMENT TO SURFACE If the cement does **not** circulate to surface contact the BLM and UDOGM office for further instructions and remedial actions. Top out with premium cement regardless of circulation.

WOC A TOTAL OF 24 HOURS:

Wait 4 hours with the hydrostatic pressure of the displacement fluid in place, then cut off conductor and weld on a 13-5/8" 5M x 13-3/8" SOW casing head w/ MBS spool configured to hang both 9-5/8" and 7" csg strings without nipping down BOPE. NU a 13-5/8" 5M double ram BOP w/ 5M annular and 5M choke manifold rigged to mud/gas separator, mud tanks and flare pit.

PROTECTIVE CASING HOLE: 2000' to 6225'

Trip in the hole with a 12-1/4" bit, mud motor, MWD & BHA. Drill float, shoe and 20' of new hole. Perform a formation integrity test to 10.5 ppg mud weight equivalent. Directionally drill a 12-1/4" hole with a PDC and/or a TCI rock bit, mud motor, MWD & BHA to approximately 6225' MD using same salt mud system as above. Loss circulation, moving salt, gypsum and anhydrite stringers may be a problem in this interval. Maintain hole angle and azimuth in keeping with the attached directional plan. Protective casing should be set into the top of the Twin Creek formation approximately 100-150'.

PRESSURE CONTROL AND SAFETY EQUIPMENT FOR PROTECTIVE CASING STRING

Bottom to Top (see attached 5M BOP diagram)

13-5/8" 5M x 13-3/8" SOW casing head w/ (2) 2-1/16" SSO's (for 9-5/8")
13-5/8" 5M x 13-5/8" 5M multi-bowl casing spool (for 7")
13-5/8" 5M x 13-5/8" spacer spool
13-5/8" 5M x 13-5/8" 5M mud cross with (2) side outlets:
 one outlet 2-1/16" 5M kill line
 one outlet 3-1/16" 5M choke line
13-5/8" 5M double ram BOP w/ 5" pipe rams top & CSO rams btm
13-5/8" 5M Annular Preventer
13-5/8" 5M rotating head
 Connect BOP to choke manifold with pressure guage
 Upper kelly cock valves with handles available
 Safety valves and subs to fit all drill string connections in use
 Inside BOP or float sub available

Testing Procedure:

Annular Preventer

The annular preventer will be pressure tested to 1500 psi for a period of ten minutes or until provisions of the test are met, whichever is longer. At a minimum, the pressure test will be performed:

- 1) When the annular is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The annular preventer will be functionally operated once per week.

Blowout Preventer

The BOP, choke manifold and related equipment will be pressure tested to 4500 psi, or 70% of the internal yield of the casing. Pressure will be maintained for a period of at least ten minutes or until the requirements of the test are met, whichever is longer. At a minimum the pressure test will be performed:

- 1) When the BOP is initially installed
- 2) Whenever any seal subject to test pressure is broken
- 3) Following related repairs and at 30 day intervals

The pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills will be recorded in the IADC driller's log.

Accumulator:

The accumulator will have sufficient capacity to open the hydraulically controlled gate valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psig above pre-charge on the closing manifold without the use of the closing unit pumps. The reservoir capacity will be double the accumulator capacity, and the fluid level will be maintained at the manufacturer's recommendations. The accumulator shall have two (2) independent power sources to close the preventers. Nitrogen bottles may be one of

the independent power sources and, if so, shall maintain a charge equal to the manufacturer's specifications.

The accumulator pre-charge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six months thereafter. The accumulator pressure will be corrected if the measured pre-charge pressure is found to be above or below the maximum or minimum limits specified in Onshore Oil & Gas Order Number 2 (only nitrogen gas may be used to pre-charge).

Choke Manifold Equipment, Valves and Remote Controls

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration

A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

The choke manifold and BOP extension rods with hand wheels will be located outside the rig sub structure. The hydraulic BOP closing unit will be located at least twenty-five feet from the well head but readily accessible to the driller.

A flare line will be installed after the choke manifold, extending 100 feet from the center of the drill hole to a separate flare pit.

MUD PROGRAM FOR PROTECTIVE CASING HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	FLUID LOSS
2000' – 6225'	9.8 – 10.5	Salt Mud	36 - 50	NC

Maintain a salt mud system as salt and gypsum sections are drilled. If loss circulation becomes a problem use LCM sweeps to control seepage & clean hole.

CASING PROGRAM FOR PROTECTIVE CASING HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
0' – TD'	9-5/8"	6225'	* 47#	N-80	LT&C	

Rig up casing tools and run 9-5/8" protective casing as follows:

Float shoe, 2 joint of 9-5/8" * 47.0# N-80 LT&C casing, float collar, 6 centralizers, middle shoe joint and one every other joint for 12 jts, run balance of 9-5/8" 47# N-80

* due to availability 47# HCP-110 may be substituted

CEMENT PROGRAM FOR PROTECTIVE CASING

350 sx 50:50 POZ

Weight: 13.0 ppg

Yield: 1.71 ft³/sx

TOC at ~ 5300'; Calculate cement volume based on gauge hole plus 30% excess.

Displace with mud. Land 9-5/8" csg with casing mandrel. Lay down landing joint.

Clean pits and prepare for next hole section.

PRODUCTION HOLE: 6225' to 7350'

Trip in the hole with an 8-1/2" insert bit, mud motor & MWD. Drill float, shoe and 20' of new hole.

PRESSURE CONTROL AND SAFETY EQUIPMENT FOR PRODUCTION CASING STRING

Same as Protective String above due to utilization of Multi-Bowl Casing Head Assembly – Land 9-5/8" through BOPE with casing mandrel, release, test & proceed to drilling production hole section – Nipple down & nipple up NOT required – all BOPE remains intact – normal periodic pressure testing remains on schedule

MUD PROGRAM FOR PRODUCTION HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	pH	FLUID LOSS
6225' - 7350'	8.3 – 9.0	LC Polymer	34-50	9.0-10.0	10cc or Less

EVALUATION PROGRAM FOR PRODUCTION HOLE

At TD, circulate and condition hole clean for logs. Short trip to the intermediate casing monitoring well closely. TOH for logs. Run Induction tool as run #1 to determine hole conditions for logging. Adjust tool configurations depending on hole condition.

Mudlogger: From 2000' to total depth.

Electric Logs:

Tool	PCP to TD
SDL/DSN/GR (DSN PCP to surface casing)	Yes
HRI/GR/SP (DLL/MSFL/SP/GR available if brine system)	Yes
EMI	Yes
NMR	Yes

DST: none planned

Cores: none planned

CASING PROGRAM FOR PRODUCTION HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
0' – TD'	7"	7350'	* 26#	N-80	LT&C	

* due to availability 23# HCP-110 may be substituted for 26# N-80

Rig up casing tools and run 7" production casing as follows:

Float shoe, 1 joint of 7" 26# N-80 LT&C casing, Float collar, Run balance of 7" 26# N80.

CEMENT PROGRAM FOR PRODUCTION CASING

500 sx (50:50) POZ Premium
2 % Bentonite
Friction reducer, salt & flocele

Weight: 14.35 ppg
Yield: 1.27 ft³/sx

TOC at \pm 5500 ft in 9-5/8" csg; Calculate cement volume based on log caliper \pm 25%.
Displace cement w/water. Hang 85-90% casing weight in slips, ND, cut off, install B-section and night cap. Clean pits and release rig.

SCHEDULE

Location preparation is presently scheduled to begin on or about existing
Drilling operations are anticipated to begin on or about September 1, 2005
end

PRESSURE CONTROL SYSTEM SCHEMATIC

Prepared by:
EXACT Engineering, Inc
Tulsa, OK (918) 599-9400

Operator:

Wolverine Gas & Oil Co. of Utah, LLC

Well name and number

Wolverine Federal #18-1

5M BOP Stack — to be utilized while drilling holes for protective and production casings thru lower Arapien, Twin Creek & Navajo intervals

Max. anticipated surface pressure 3000 psi

Annular B.O.P. 13-5/8" – 5M WP

B.O.P.
___ Manual
x Hydraulic
___ Sour Trim

B.O.P. 5" pipe Rams 13-5/8" – 5M W.P.
(Pipe/Blind)

B.O.P. blind Rams 13-5/8" – 5M W.P.
(Pipe/Blind)

Check Valve 2-1/16" 5M WP

Valve 2-1/16" 5M WP

Valve 2-1/16" 5M WP

Valve 3-1/16" 5M WP

Valve 3-1/16" 5M WP

Kill Line Manifold

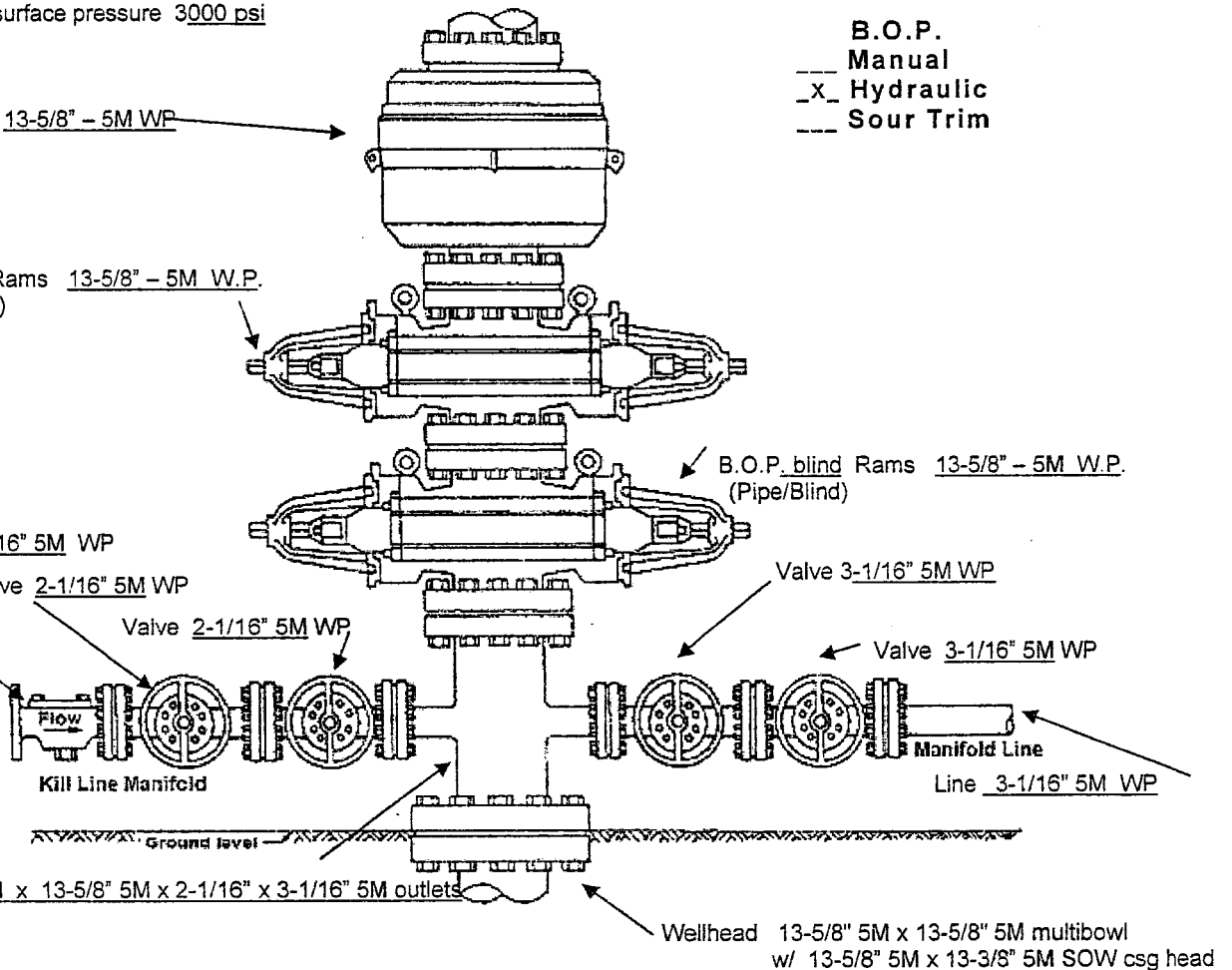
Manifold Line

Line 3-1/16" 5M WP

Spool 13-5/8" 5M x 13-5/8" 5M x 2-1/16" x 3-1/16" 5M outlets

Wellhead 13-5/8" 5M x 13-5/8" 5M multibowl
w/ 13-5/8" 5M x 13-3/8" 5M SOW csg head

Ground level



WOLVERINE GAS & OIL CO. OF UTAH
Wolverine Fed. 18-1
Sevier County, Utah



Weatherford

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	250.82	0.00	0.00	0.00	0.00	0.00	0.00	
2	1000.00	0.00	250.82	1000.00	0.00	0.00	0.00	0.00	0.00	
3	1979.90	29.40	250.82	1937.47	-80.80	-232.26	3.00	250.82	245.91	
4	5516.31	29.40	250.82	5018.53	-651.20	-1871.74	0.00	0.00	1981.79	
5	6496.21	0.00	250.82	5956.00	-732.00	-2104.00	3.00	180.00	2227.70	18-1(NVJO)
6	7340.21	0.00	250.82	6800.00	-732.00	-2104.00	0.00	250.82	2227.70	18-1 PBHL

SITE DETAILS

Wolverine Federal #18-1(Pad B1)
 Section 17, T23S, R1W, Sevier County, Utah
 829 FSL & 1928 FWL, "F" Slot
 Ground Level: 5839.00
 Positional Uncertainty: 0.00
 Convergence: -0.28

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
18-1	0.00	0.00	6731063.02	1516505.41	38°47'51.095N	111°56'05.061W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
18-1(NVJO)	5956.00	-732.00	-2104.00	Rectangle (400x400)
18-1 PBHL	6800.00	-732.00	-2104.00	Rectangle (400x400)

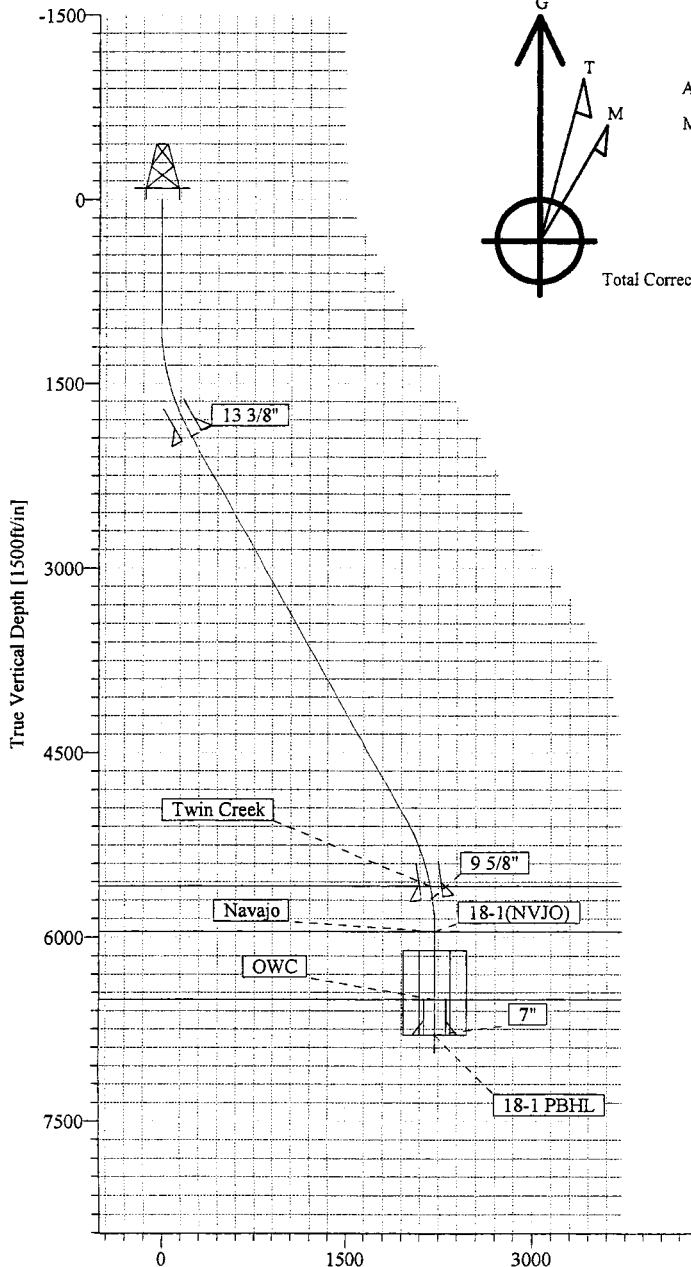
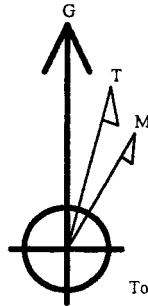
FIELD DETAILS

Covenant Field
 Sevier County, Utah
 USA
 Geodetic System: US State Plane Coordinate System 1983
 Ellipsoid: GRS 1980
 Zone: Utah, Central Zone
 Magnetic Model: igrf2005
 System Datum: Mean Sea Level
 Local North: Grid North

Azimuths to Grid North
 True North: 0.28°
 Magnetic North: 12.80°

Magnetic Field
 Strength: 51914nT
 Dip Angle: 64.50°
 Date: 8/22/2005
 Model: igrf2005

Total Correction: 12.80°

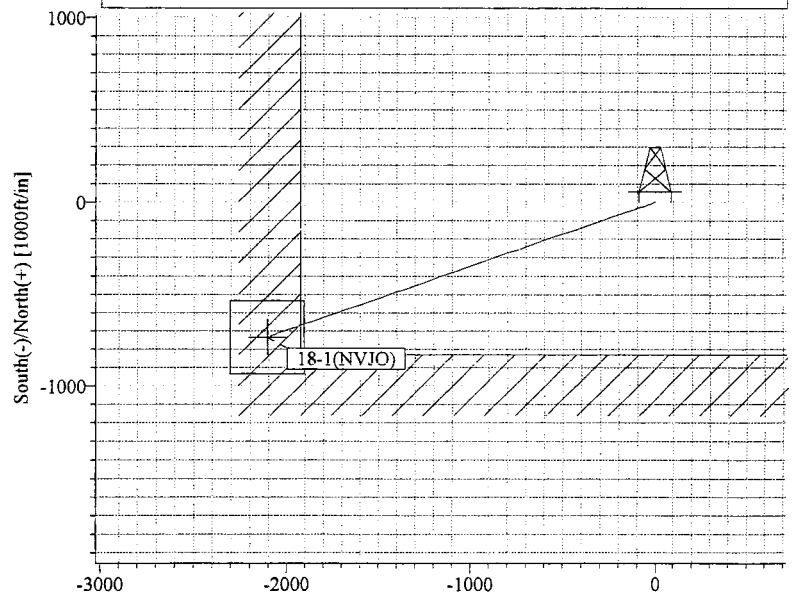


CASING DETAILS

No.	TVD	MD	Name	Size
1	1937.47	1979.90	13 3/8"	13.375
2	5688.00	6227.32	9 5/8"	9.625
3	6800.00	7340.21	7"	7.000

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	5588.00	6125.89	Twin Creek
2	5956.00	6496.21	Navajo
3	6509.00	7049.21	OWC



Vertical Section at 250.82° [1500ft/in]

Created By: Scott Wallace 08/22/05

West(-)/East(+) [1000ft/in]

Weatherford International

Planning Report

Company: Wolverine Gas & Oil Co of Utah	Date: 8/23/2005	Time: 08:58:37	Page: 1
Field: Covenant Field	Co-ordinate(NE) Reference: Well: 18-1, Grid North		
Site: Wolverine Federal #18-1(Pad B1)	Vertical (TVD) Reference: System: Mean Sea Level		
Well: 18-1	Section (VS) Reference: Well (0.00N,0.00E,250.82Azi)		
Wellpath: 1	Plan: Plan #1rev.2		

Field: Covenant Field Sevier County, Utah USA	Map Zone: Utah, Central Zone
Map System: US State Plane Coordinate System 1983	Coordinate System: Well Centre
Geo Datum: GRS 1980	Geomagnetic Model: igrf2005
Sys Datum: Mean Sea Level	

Site: Wolverine Federal #18-1(Pad B1) Section 17, T23S, R1W, Sevier County, Utah 829 FSL & 1928 FWL, "F" Slot	
Site Position: Northing: ft	Latitude:
From: Lease Line	Longitude:
Position Uncertainty: 0.00 ft	North Reference: Grid
Ground Level: 5839.00 ft	Grid Convergence: -0.28 deg

Well: 18-1	Slot Name:
Well Position: +N/-S 0.00 ft	Latitude: 38 47 51.095 N
+E/-W 0.00 ft	Longitude: 111 56 5.061 W
Position Uncertainty: 0.00 ft	

Wellpath: 1	Drilled From: Surface
Current Datum: Mean Sea Level	Tie-on Depth: 0.00 ft
Magnetic Data: 8/22/2005	Above System Datum: Mean Sea Level
Field Strength: 51914 nT	Declination: 12.52 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 64.50 deg
ft	+E/-W Direction
	ft deg
0.00	0.00
0.00	250.82

Plan: Plan #1rev.2	Date Composed: 6/9/2005
Principal: Yes	Version: 2
	Tied-to: From Surface

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	250.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1000.00	0.00	250.82	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1979.90	29.40	250.82	1937.47	-80.80	-232.26	3.00	3.00	0.00	250.82	
5516.31	29.40	250.82	5018.53	-651.20	-1871.74	0.00	0.00	0.00	0.00	
6496.21	0.00	250.82	5956.00	-732.00	-2104.00	3.00	-3.00	0.00	180.00	18-1(NVJO)
7340.21	0.00	250.82	6800.00	-732.00	-2104.00	0.00	0.00	0.00	250.82	18-1 PBHL

Section 1 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
0.00	0.00	250.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	250.82	100.00	0.00	0.00	0.00	0.00	0.00	0.00	250.82
200.00	0.00	250.82	200.00	0.00	0.00	0.00	0.00	0.00	0.00	250.82
300.00	0.00	250.82	300.00	0.00	0.00	0.00	0.00	0.00	0.00	250.82
400.00	0.00	250.82	400.00	0.00	0.00	0.00	0.00	0.00	0.00	250.82
500.00	0.00	250.82	500.00	0.00	0.00	0.00	0.00	0.00	0.00	250.82
600.00	0.00	250.82	600.00	0.00	0.00	0.00	0.00	0.00	0.00	250.82
700.00	0.00	250.82	700.00	0.00	0.00	0.00	0.00	0.00	0.00	250.82
800.00	0.00	250.82	800.00	0.00	0.00	0.00	0.00	0.00	0.00	250.82
900.00	0.00	250.82	900.00	0.00	0.00	0.00	0.00	0.00	0.00	250.82
1000.00	0.00	250.82	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	250.82

Section 2 : Start Build 3.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
1100.00	3.00	250.82	1099.95	-0.86	-2.47	2.62	3.00	3.00	0.00	0.00
1200.00	6.00	250.82	1199.63	-3.44	-9.88	10.46	3.00	3.00	0.00	0.00

Weatherford International

Planning Report

Company: Wolverine Gas & Oil Co of Utah
Field: Covenant Field
Site: Wolverine Federal #18-1 (Pad B1)
Well: 18-1
Wellpath: 1

Date: 8/23/2005 Time: 08:58:37
Co-ordinate(NE) Reference: Well: 18-1, Grid North
Vertical (TVD) Reference: System: Mean Sea Level
Section (VS) Reference: Well (0.00N,0.00E,250.82Azi)
Plan: Plan #1rev.2

Page: 2

Section 2 : Start Build 3.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
1300.00	9.00	250.82	1298.77	-7.73	-22.21	23.51	3.00	3.00	0.00	0.00
1400.00	12.00	250.82	1397.08	-13.71	-39.42	41.74	3.00	3.00	0.00	0.00
1500.00	15.00	250.82	1494.31	-21.38	-61.46	65.08	3.00	3.00	0.00	0.00
1600.00	18.00	250.82	1590.18	-30.72	-88.28	93.48	3.00	3.00	0.00	0.00
1700.00	21.00	250.82	1684.43	-41.68	-119.81	126.85	3.00	3.00	0.00	0.00
1800.00	24.00	250.82	1776.81	-54.26	-155.95	165.12	3.00	3.00	0.00	0.00
1900.00	27.00	250.82	1867.06	-68.40	-196.60	208.16	3.00	3.00	0.00	0.00
1979.90	29.40	250.82	1937.47	-80.80	-232.26	245.91	3.00	3.00	0.00	0.00

Section 3 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
2000.00	29.40	250.82	1954.98	-84.05	-241.58	255.78	0.00	0.00	0.00	0.00
2100.00	29.40	250.82	2042.11	-100.18	-287.94	304.87	0.00	0.00	0.00	0.00
2200.00	29.40	250.82	2129.23	-116.31	-334.30	353.95	0.00	0.00	0.00	0.00
2300.00	29.40	250.82	2216.35	-132.43	-380.66	403.04	0.00	0.00	0.00	0.00
2400.00	29.40	250.82	2303.48	-148.56	-427.02	452.12	0.00	0.00	0.00	0.00
2500.00	29.40	250.82	2390.60	-164.69	-473.38	501.21	0.00	0.00	0.00	0.00
2600.00	29.40	250.82	2477.73	-180.82	-519.74	550.29	0.00	0.00	0.00	0.00
2700.00	29.40	250.82	2564.85	-196.95	-566.10	599.38	0.00	0.00	0.00	0.00
2800.00	29.40	250.82	2651.97	-213.08	-612.46	648.47	0.00	0.00	0.00	0.00
2900.00	29.40	250.82	2739.10	-229.21	-658.82	697.55	0.00	0.00	0.00	0.00
3000.00	29.40	250.82	2826.22	-245.34	-705.18	746.64	0.00	0.00	0.00	0.00
3100.00	29.40	250.82	2913.35	-261.47	-751.54	795.72	0.00	0.00	0.00	0.00
3200.00	29.40	250.82	3000.47	-277.60	-797.90	844.81	0.00	0.00	0.00	0.00
3300.00	29.40	250.82	3087.59	-293.73	-844.26	893.89	0.00	0.00	0.00	0.00
3400.00	29.40	250.82	3174.72	-309.85	-890.62	942.98	0.00	0.00	0.00	0.00
3500.00	29.40	250.82	3261.84	-325.98	-936.98	992.07	0.00	0.00	0.00	0.00
3600.00	29.40	250.82	3348.97	-342.11	-983.34	1041.15	0.00	0.00	0.00	0.00
3700.00	29.40	250.82	3436.09	-358.24	-1029.70	1090.24	0.00	0.00	0.00	0.00
3800.00	29.40	250.82	3523.21	-374.37	-1076.06	1139.32	0.00	0.00	0.00	0.00
3900.00	29.40	250.82	3610.34	-390.50	-1122.42	1188.41	0.00	0.00	0.00	0.00
4000.00	29.40	250.82	3697.46	-406.63	-1168.78	1237.49	0.00	0.00	0.00	0.00
4100.00	29.40	250.82	3784.59	-422.76	-1215.14	1286.58	0.00	0.00	0.00	0.00
4200.00	29.40	250.82	3871.71	-438.89	-1261.50	1335.67	0.00	0.00	0.00	0.00
4300.00	29.40	250.82	3958.83	-455.02	-1307.86	1384.75	0.00	0.00	0.00	0.00
4400.00	29.40	250.82	4045.96	-471.14	-1354.22	1433.84	0.00	0.00	0.00	0.00
4500.00	29.40	250.82	4133.08	-487.27	-1400.58	1482.92	0.00	0.00	0.00	0.00
4600.00	29.40	250.82	4220.21	-503.40	-1446.94	1532.01	0.00	0.00	0.00	0.00
4700.00	29.40	250.82	4307.33	-519.53	-1493.30	1581.09	0.00	0.00	0.00	0.00
4800.00	29.40	250.82	4394.45	-535.66	-1539.66	1630.18	0.00	0.00	0.00	0.00
4900.00	29.40	250.82	4481.58	-551.79	-1586.02	1679.27	0.00	0.00	0.00	0.00
5000.00	29.40	250.82	4568.70	-567.92	-1632.38	1728.35	0.00	0.00	0.00	0.00
5100.00	29.40	250.82	4655.83	-584.05	-1678.74	1777.44	0.00	0.00	0.00	0.00
5200.00	29.40	250.82	4742.95	-600.18	-1725.10	1826.52	0.00	0.00	0.00	0.00
5300.00	29.40	250.82	4830.07	-616.31	-1771.46	1875.61	0.00	0.00	0.00	0.00
5400.00	29.40	250.82	4917.20	-632.44	-1817.82	1924.69	0.00	0.00	0.00	0.00
5500.00	29.40	250.82	5004.32	-648.56	-1864.18	1973.78	0.00	0.00	0.00	0.00
5516.31	29.40	250.82	5018.53	-651.20	-1871.74	1981.79	0.00	0.00	0.00	0.00

Section 4 : Start Drop -3.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
5600.00	26.89	250.82	5092.32	-664.16	-1909.02	2021.25	3.00	-3.00	0.00	180.00
5700.00	23.89	250.82	5182.66	-678.25	-1949.51	2064.12	3.00	-3.00	0.00	180.00
5800.00	20.89	250.82	5275.11	-690.76	-1985.47	2102.20	3.00	-3.00	0.00	180.00
5900.00	17.89	250.82	5369.43	-701.67	-2016.82	2135.39	3.00	-3.00	0.00	180.00
6000.00	14.89	250.82	5465.36	-710.94	-2043.46	2163.60	3.00	-3.00	0.00	180.00
6100.00	11.89	250.82	5562.63	-718.54	-2065.32	2186.75	3.00	-3.00	0.00	180.00
6125.89	11.11	250.82	5588.00	-720.24	-2070.20	2191.91	3.00	-3.00	0.00	180.00
6200.00	8.89	250.82	5660.98	-724.47	-2082.35	2204.77	3.00	-3.00	0.00	-180.00
6227.32	8.07	250.82	5688.00	-725.79	-2086.15	2208.80	3.00	-3.00	0.00	180.00

Weatherford International

Planning Report

Company: Wolverine Gas & Oil Co of Utah
Field: Covenant Field
Site: Wolverine Federal #18-1(Pad B1)
Well: 18-1
Wellpath: 1

Date: 8/23/2005 **Time:** 08:58:37
Co-ordinate(NE) Reference: Well: 18-1, Grid North
Vertical (TVD) Reference: System: Mean Sea Level
Section (VS) Reference: Well (0.00N,0.00E,250.82Azi)
Plan: Plan #1rev.2

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Section 4 : Start Drop -3.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
6300.00	5.89	250.82	5760.14	-728.69	-2094.49	2217.63	3.00	-3.00	0.00	-180.00
6400.00	2.89	250.82	5859.83	-731.20	-2101.71	2225.28	3.00	-3.00	0.00	180.00
6496.21	0.00	250.82	5956.00	-732.00	-2104.00	2227.70	3.00	-3.00	0.00	-180.00

Section 5 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
6500.00	0.00	250.82	5959.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	250.82
6600.00	0.00	250.82	6059.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	250.82
6700.00	0.00	250.82	6159.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	250.82
6800.00	0.00	250.82	6259.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	250.82
6900.00	0.00	250.82	6359.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	250.82
7000.00	0.00	250.82	6459.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	250.82
7049.21	0.00	250.82	6509.00	-732.00	-2104.00	2227.70	0.00	0.00	0.00	250.82
7100.00	0.00	250.82	6559.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	250.82
7200.00	0.00	250.82	6659.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	250.82
7300.00	0.00	250.82	6759.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	250.82
7340.21	0.00	250.82	6800.00	-732.00	-2104.00	2227.70	0.00	0.00	0.00	250.82

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	250.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	250.82	100.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
200.00	0.00	250.82	200.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
300.00	0.00	250.82	300.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
400.00	0.00	250.82	400.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
500.00	0.00	250.82	500.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
600.00	0.00	250.82	600.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
700.00	0.00	250.82	700.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
800.00	0.00	250.82	800.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
900.00	0.00	250.82	900.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
1000.00	0.00	250.82	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
1100.00	3.00	250.82	1099.95	-0.86	-2.47	2.62	3.00	3.00	0.00	MWD
1200.00	6.00	250.82	1199.63	-3.44	-9.88	10.46	3.00	3.00	0.00	MWD
1300.00	9.00	250.82	1298.77	-7.73	-22.21	23.51	3.00	3.00	0.00	MWD
1400.00	12.00	250.82	1397.08	-13.71	-39.42	41.74	3.00	3.00	0.00	MWD
1500.00	15.00	250.82	1494.31	-21.38	-61.46	65.08	3.00	3.00	0.00	MWD
1600.00	18.00	250.82	1590.18	-30.72	-88.28	93.48	3.00	3.00	0.00	MWD
1700.00	21.00	250.82	1684.43	-41.68	-119.81	126.85	3.00	3.00	0.00	MWD
1800.00	24.00	250.82	1776.81	-54.26	-155.95	165.12	3.00	3.00	0.00	MWD
1900.00	27.00	250.82	1867.06	-68.40	-196.60	208.16	3.00	3.00	0.00	MWD
1979.90	29.40	250.82	1937.47	-80.80	-232.26	245.91	3.00	3.00	0.00	13 3/8"
2000.00	29.40	250.82	1954.98	-84.05	-241.58	255.78	0.00	0.00	0.00	MWD
2100.00	29.40	250.82	2042.11	-100.18	-287.94	304.87	0.00	0.00	0.00	MWD
2200.00	29.40	250.82	2129.23	-116.31	-334.30	353.95	0.00	0.00	0.00	MWD
2300.00	29.40	250.82	2216.35	-132.43	-380.66	403.04	0.00	0.00	0.00	MWD
2400.00	29.40	250.82	2303.48	-148.56	-427.02	452.12	0.00	0.00	0.00	MWD
2500.00	29.40	250.82	2390.60	-164.69	-473.38	501.21	0.00	0.00	0.00	MWD
2600.00	29.40	250.82	2477.73	-180.82	-519.74	550.29	0.00	0.00	0.00	MWD
2700.00	29.40	250.82	2564.85	-196.95	-566.10	599.38	0.00	0.00	0.00	MWD
2800.00	29.40	250.82	2651.97	-213.08	-612.46	648.47	0.00	0.00	0.00	MWD
2900.00	29.40	250.82	2739.10	-229.21	-658.82	697.55	0.00	0.00	0.00	MWD
3000.00	29.40	250.82	2826.22	-245.34	-705.18	746.64	0.00	0.00	0.00	MWD
3100.00	29.40	250.82	2913.35	-261.47	-751.54	795.72	0.00	0.00	0.00	MWD
3200.00	29.40	250.82	3000.47	-277.60	-797.90	844.81	0.00	0.00	0.00	MWD

Weatherford International

Planning Report

Company: Wolverine Gas & Oil Co of Utah
Field: Covenant Field
Site: Wolverine Federal #18-1(Pad B1)
Well: 18-1
Wellpath: 1

Date: 8/23/2005
Co-ordinate(NE) Reference: Well: 18-1, Grid North
Vertical (TVD) Reference: System: Mean Sea Level
Section (VS) Reference: Well (0.00N,0.00E,250.82Azi)
Plan: Plan #1rev.2

Page: 4

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
3300.00	29.40	250.82	3087.59	-293.73	-844.26	893.89	0.00	0.00	0.00	MWD
3400.00	29.40	250.82	3174.72	-309.85	-890.62	942.98	0.00	0.00	0.00	MWD
3500.00	29.40	250.82	3261.84	-325.98	-936.98	992.07	0.00	0.00	0.00	MWD
3600.00	29.40	250.82	3348.97	-342.11	-983.34	1041.15	0.00	0.00	0.00	MWD
3700.00	29.40	250.82	3436.09	-358.24	-1029.70	1090.24	0.00	0.00	0.00	MWD
3800.00	29.40	250.82	3523.21	-374.37	-1076.06	1139.32	0.00	0.00	0.00	MWD
3900.00	29.40	250.82	3610.34	-390.50	-1122.42	1188.41	0.00	0.00	0.00	MWD
4000.00	29.40	250.82	3697.46	-406.63	-1168.78	1237.49	0.00	0.00	0.00	MWD
4100.00	29.40	250.82	3784.59	-422.76	-1215.14	1286.58	0.00	0.00	0.00	MWD
4200.00	29.40	250.82	3871.71	-438.89	-1261.50	1335.67	0.00	0.00	0.00	MWD
4300.00	29.40	250.82	3958.83	-455.02	-1307.86	1384.75	0.00	0.00	0.00	MWD
4400.00	29.40	250.82	4045.96	-471.14	-1354.22	1433.84	0.00	0.00	0.00	MWD
4500.00	29.40	250.82	4133.08	-487.27	-1400.58	1482.92	0.00	0.00	0.00	MWD
4600.00	29.40	250.82	4220.21	-503.40	-1446.94	1532.01	0.00	0.00	0.00	MWD
4700.00	29.40	250.82	4307.33	-519.53	-1493.30	1581.09	0.00	0.00	0.00	MWD
4800.00	29.40	250.82	4394.45	-535.66	-1539.66	1630.18	0.00	0.00	0.00	MWD
4900.00	29.40	250.82	4481.58	-551.79	-1586.02	1679.27	0.00	0.00	0.00	MWD
5000.00	29.40	250.82	4568.70	-567.92	-1632.38	1728.35	0.00	0.00	0.00	MWD
5100.00	29.40	250.82	4655.83	-584.05	-1678.74	1777.44	0.00	0.00	0.00	MWD
5200.00	29.40	250.82	4742.95	-600.18	-1725.10	1826.52	0.00	0.00	0.00	MWD
5300.00	29.40	250.82	4830.07	-616.31	-1771.46	1875.61	0.00	0.00	0.00	MWD
5400.00	29.40	250.82	4917.20	-632.44	-1817.82	1924.69	0.00	0.00	0.00	MWD
5500.00	29.40	250.82	5004.32	-648.56	-1864.18	1973.78	0.00	0.00	0.00	MWD
5516.31	29.40	250.82	5018.53	-651.20	-1871.74	1981.79	0.00	0.00	0.00	MWD
5600.00	26.89	250.82	5092.32	-664.16	-1909.02	2021.25	3.00	-3.00	0.00	MWD
5700.00	23.89	250.82	5182.66	-678.25	-1949.51	2064.12	3.00	-3.00	0.00	MWD
5800.00	20.89	250.82	5275.11	-690.76	-1985.47	2102.20	3.00	-3.00	0.00	MWD
5900.00	17.89	250.82	5369.43	-701.67	-2016.82	2135.39	3.00	-3.00	0.00	MWD
6000.00	14.89	250.82	5465.36	-710.94	-2043.46	2163.60	3.00	-3.00	0.00	MWD
6100.00	11.89	250.82	5562.63	-718.54	-2065.32	2186.75	3.00	-3.00	0.00	MWD
6125.89	11.11	250.82	5588.00	-720.24	-2070.20	2191.91	3.00	-3.00	0.00	Twin Creek
6200.00	8.89	250.82	5660.98	-724.47	-2082.35	2204.77	3.00	-3.00	0.00	MWD
6227.32	8.07	250.82	5688.00	-725.79	-2086.15	2208.80	3.00	-3.00	0.00	9 5/8"
6300.00	5.89	250.82	5760.14	-728.69	-2094.49	2217.63	3.00	-3.00	0.00	MWD
6400.00	2.89	250.82	5859.83	-731.20	-2101.71	2225.28	3.00	-3.00	0.00	MWD
6496.21	0.00	250.82	5956.00	-732.00	-2104.00	2227.70	3.00	-3.00	0.00	18-1(NVJO)
6500.00	0.00	250.82	5959.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	MWD
6600.00	0.00	250.82	6059.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	MWD
6700.00	0.00	250.82	6159.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	MWD
6800.00	0.00	250.82	6259.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	MWD
6900.00	0.00	250.82	6359.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	MWD
7000.00	0.00	250.82	6459.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	MWD
7049.21	0.00	250.82	6509.00	-732.00	-2104.00	2227.70	0.00	0.00	0.00	OWC
7100.00	0.00	250.82	6559.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	MWD
7200.00	0.00	250.82	6659.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	MWD
7300.00	0.00	250.82	6759.79	-732.00	-2104.00	2227.70	0.00	0.00	0.00	MWD
7340.21	0.00	250.82	6800.00	-732.00	-2104.00	2227.70	0.00	0.00	0.00	18-1 PBHL

Weatherford International

Planning Report

Company: Wolverine Gas & Oil Co of Utah
Field: Covenant Field
Site: Wolverine Federal #18-1(Pad B1)
Well: 18-1
Wellpath: 1

Date: 8/23/2005 **Time:** 08:58:37 **Page:** 5
Co-ordinate(NE) Reference: Well: 18-1, Grid North
Vertical (TVD) Reference: System: Mean Sea Level
Section (VS) Reference: Well (0.00N,0.00E,250.82Azi)
Plan: Plan #1rev.2

Targets

Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec			<--- Longitude ---> Deg Min Sec		
18-1(NVJO)		5956.00	-732.00	-2104.00	6730331.021514401.41	38 47 43.758 N	111 56 31.589 W					
-Rectangle (400x400)												
-Plan hit target												
18-1 PBHL		6800.00	-732.00	-2104.00	6730331.021514401.41	38 47 43.758 N	111 56 31.589 W					
-Rectangle (400x400)												
-Plan hit target												

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
1979.90	1937.47	13.375	17.500	13 3/8"
6227.32	5688.00	9.625	12.250	9 5/8"
7340.21	6800.00	7.000	8.500	7"

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
6125.89	5588.00	Twin Creek		0.00	0.00
6496.21	5956.00	Navajo		0.00	0.00
7049.21	6509.00	OWC		0.00	0.00



OLENE S. WALKER
Governor
GAYLE F. McKEACHNIE
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
Division of Water Rights

ROBERT L. MORGAN
Executive Director

JERRY D. OLDS
State Engineer/Division Director

April 12, 2004

Kings Meadow Ranches
C/O Mack Dastrup
P.O. Box 570125
Sigurd, UT 84657

RE: TEMPORARY CHANGE APPLICATION
t28851

Dear Sir:

The above numbered Temporary Change Application has been approved subject to prior rights and the following condition:

- ♦ The total amount of water diverted from Kings Meadow Creek will be limited to 14.0 acre-feet of water for uses associated with gas well drilling from May 30, 2004 to May 30, 2005. The historically irrigated land totaling 4.667 acres will not be irrigated.

Copies are herewith returned to you for your records and future reference.

Sincerely,

Kirk Forbush, P.E.
Regional Engineer
for Jerry Olds, State Engineer

JO/KF/cr
enclosure

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: Wolverine Gas and Oil Company of Utah, LLC
Address: 55 Campau NW, One Riverfront Plaza
city Grand Rapids
state MI zip 49503-2616

Operator Account Number: N 1655
Phone Number: (616) 458-1150

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304130034	Wolverine Federal 18-1		SESE	1817	23S	1W	Sevier
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	14917	9/8/2005			9/8/05	
Comments: SHL SESW Sec 17 <i>NAVA</i> CONFIDENTIAL							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
Comments:							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
Comments:							

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

George C. Nicely - EXACT Engineering Inc

Name (Please Print)

Signature

Engineering Technician

Title

9/6/2005

Date

(5/2000)

RECEIVED**SEP 06 2005**

DIV. OF OIL, GAS & MINING

CONFIDENTIAL

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: WOLVERINE GAS & OIL COMPANY UT

Well Name: WOLVERINE FED 18-1

Api No: 43-041-30034 Lease Type: FEDERAL

Section 17 Township 23S Range 01W County SEVIER

Drilling Contractor UNIT DRILLING RIG # 111

SPUDDED:

Date 09/06/05

Time _____

How DRY

Drilling will Commence: _____

Reported by CHRIS NICELY (XACT ENGINEERING)

Telephone # 1-918-599-9490

Date 09/07/2005 Signed CHD

EXACT Engineering, Inc.**www.exactengineering.com**

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E.
Registered Professional Engineer
stevehash@exactengineering.com

CONFIDENTIAL PLEASE!

September 12, 2005

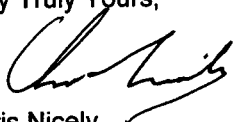
Mr. Dustin Doucet
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re: Wolverine Federal 18-1 well
Sec 18 T23S R01W
Sevier Co, UT
API# 43-041-30034

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily drilling reports for the subject well from September 5, 2005 through September 11, 2005. The well spud on September 6 and we are presently running 13-3/8" casing at 2,001'. We respectfully request that the enclosed information remain confidential.

Very Truly Yours,



Chris Nicely
Engineering Technician

Enclosures

copy without enclosures via email to:

Wolverine Gas & Oil Co of Utah, LLC:
EXACT Engineering, Inc.

Helene Bardolph
well file

RECEIVED**SEP 15 2005**

DIV. OF OIL, GAS & MINING

Petroleum Engineering Consulting, Personnel & Jobsite Supervision

complete well design, construction & management, drilling, completion, production, pipelines, appraisals,
due diligence, acquisitions, procedures, temporary personnel and field supervision

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: **Wolverine G&O Co of Utah, LLC**

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
09/11/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-30034	RD REBSOM	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
6	RUN 13-3/8" CASING	2,001	109	13.00	8.4	Arapian	7170 md

MUD DATA

MOD DATA															
WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.3	33	NC	2/32	8.5	TR	5.00	4	9	5/9	1961	9-11-0800	35,000	460		57,750

BIT DATA

BIT DATA																				
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION			
																	T	B	G	
2	17.500	STC	MX-09-HDX	RR	6012085	4	X	28	1772	2001	229	24.50	9.3	Y	30-120	35	4	4	1	
													#DIV/0!							
													#DIV/0!							
																		END OF BIT DATA		

HYDRAULICS

HYDRAULICS																
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		67 spm	76 spm	100 spm
1	National	6"	8.5	2.96	110	310			1650	225			1			
2	National	6"	8.5	2.96	110	310							2			
3	National	6"	8.5	2.96									3			

SLOW PUMP

	67 spm	76 spm	100 spm
1			
2			
3			

DRILL STRING

DRILL STRING				
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
BIT - 17.5"		1.50	X-OVER	2.600
MUD MOTOR - 2 Deg.		27.74	5.625 HSW	180.160
X-OVER=FLOAT SUB		3.05	X-OVER	1.460
14.75" IBS		5.66	14-5"HSW	427.230
UBHO		2.29	JARS	32.680
MONEL - SD37716		30.89	3-5"HSW	90.240
MONEL - 228126		30.66	T-BHA. =	848.180
SHOCK SUB - 580002		11.82		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
105	55	115	100	195

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
SURFACE			
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,839	17	5,856	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Nurren	918-645-6671
Last BOP Test	
Next BOP Test	
Last Safety Meeting	9/11
Last BOP Drill	9/3
Last Operate Pipe Ram	
Last Operate Blind Ram	
Last Operate Annular	
LAST CASING	NEXT CASING
20" @ 120'	13.375 @ 2500

SURVEYS

[illegible]

DAILY ACTIVITY

FROM			LAST 24 HOURS:
0:00	9:00	9.00	DRILL FROM 1892' TO 1975'--- MWD---NOT WORKING
9:00	9:30	0.50	SERVICE RIG---CHANGE LINER # 1 PUMP
9:30	13:30	4.00	DRILL FROM 1975' TO 2001' = TD - 17-1/2" HOLE
13:30	15:00	1.50	MIX & CIRC. 150 VIS SWEEPS TO CLEAN HOLE = 80 BBLS.
15:00	17:00	2.00	SHORT TRIP 15 STANDS---WELL TOOK 4.5BBLS OF FLUID OVER DISPLACEMENT ON SHORT TRIP.
17:00	17:30	0.50	WASH & REAM 45' TO BOTTOM 28' FILL - GOOD RETURNS
17:30	19:00	1.50	MIX & CIRC. 150 VIS SWEEPS TO CLEAN HOLE = 80 BBLS.--READY TO RUN 13-3/8" CASING..
19:00	21:00	2.00	TRIP OUT - SLM - NO CORRECTION
21:00	22:30	1.50	LAY DOWN MWD---IBS---MUD MOTOR---UVHO SUB---BIT..
22:30	23:30	1.00	RIG UP CASING CREW---SAFETY METTING
23:30	0:00	0.50	PICKUP & RUN 13-3/8" CASING

CONFIDENTIAL

Daily Total	24.00
-------------	-------

Engineering & Supervision		EXACT Engineering, Inc.				(918) 599-9400			
Operator: Wolverine G&O Co of Utah, LLC		DAILY DRILLING REPORT				24 hrs - midnight to midnight			
DATE	WELL	CONTRACTOR		COUNTY, STATE	SPUD DATE	API#		SUPERVISOR	
09/10/05	Wolverine Federal 18-1	Unit Rig #111		Sevier, UT	9/6/05	43-041-30034		RD REBSOM	
DAYS / SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH	
5	DRILLING		1,892	120	11.50	10.4	Arapian	7170 md	

MUD DATA															
WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.3	35	NC	2/32	7.5	TR	5.00	7	11	7/12	1772	9-10-0800	35,000	480		57,750

BIT DATA																			
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
																	T	B	G
1	17.500	HTC	MX-05	417	S96JM	4	X	28	137	1772	1626	71.00	22.9	Y	30-120	30	2	6	1
2	17.500	STC	MX-09-HDX		6012085	4	X	28	1772		120	11.50	10.4	Y	30-120	35			
													#DIV/0!						
													#DIV/0!						

HYDRAULICS													SLOW PUMP		
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD	67 spm	76 spm	100 spm
1	National	6"	8.5	2.96	110	310			1650	225			1		
2	National	6"	8.5	2.96	110	310							2		
3	National	6"	8.5	2.96									3		

DRILL STRING				GEOLOGIC				GENERAL INFO			
BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	RIG INFO			
BIT - 17.5"	1.50	X-OVER	2.600	SURFACE				Rig No Unit 111			
MUD MOTOR - 2 Deg.	27.74	5.625 HSW	180.160					Cell Narren 918-645-6671			
X-OVER=FLOAT SUB	3.05	X-OVER	1.460					Last BOP Test			
14.75" IBS	5.66	14.5"HSW	427.230	GAS DATA				Next BOP Test			
UBHO	2.29	JARS	32.680	BOTTOMS UP TIME	BG GAS	CORN GAS	TRIP GAS	Last Safety Meeting 9/10			
MONEL - SD37716	30.89	3-5"HSW	90.240	SHOWS				Last BOP Drill 9/3			
MONEL - 228126	30.66	T-BHA. =	848.180	GAS UNITS	FROM	TO	ROP (F1/HR)	Last Operate Pipe Rar			
SHOCK SUB - 580002	11.82							Last Operate Blind Ra			
								Last Operate Annular			
STRING WT.	BHA WT.	PU WT.	50 WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING		NEXT CASING
100	55	110	95	235	5,839	17	5,856		20" @ 120'		13.375 @ 2500

SURVEYS																	
MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
1,619	11.80	252.20	1611	130	-20	-130	1.53	MWD									MWD
1,693	12.80	248.20	1683	145	-25	-145	1.77	MWD									MWD

DAILY ACTIVITY			
FROM			LAST 24 HOURS:
0:00	1:00	1.00	TESTING MWD
1:00	3:00	2.00	BUILDING VOLUME--MIX UP 35 VIS--45%LCM--THREW OUT HOLE MUD SYSTEM=850BBLS
3:00	4:30	1.50	TRIP IN HOLE
4:30	5:00	0.50	WASH & REAM FROM 1666' TO 1708'--NO RETURNS
5:00	6:00	1.00	MIX & PUMP 150 VIS-55%LCM--40BBLS @ A TIME IN PILL TANK UNTILL REGAINED CIRC. = 120 BBLS
6:00	7:00	1.00	WASH & REAM FROM 1708' TO 1772'
7:00	8:00	1.00	DRILL FROM 1772' TO 1776'
8:00	9:30	1.50	TRIP OUT TO UNPLUG MWD FAILED
9:30	11:00	1.50	UNPLUG--TEST MWD--GOOD
11:00	12:30	1.50	TRIP IN HOLE
12:30	13:30	1.00	WASH & REAM FROM 1720' TO 1776' -- NO FILL -- 85-90% RETURNS--SURVEY @ 1619' & 1693'
13:30	0:00	10.50	DRILL FROM 1776' TO 1892'--95-98% RETURNS--MWD PLUGED..
			MUD MIXED OVER LAST 24 HOURS
			430 SKS.SALT GEL--420 SKS. FIBER SEAL--300 SKS.FIBER PLUG--280 SKS.SEAMUD
			234 SKS MULTISEAL--10 SKS CAUSTIC--1 CAN MECT-5--TOTAL--1674SKS..
Daily Total	24.00		

CONFIDENTIAL

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine G&O Co of Utah, LLC

Operator: Wolverine G&O Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR			
09/09/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-30034	RD REBSOM			
DAYS / SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH		
4	CHANGING OUT MWD	1,772	277	16.50	16.8	Arapian	7170 md		

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.3	35	NC	2/32	8.5	TR	5.30	5	21	13/19	1621	9-9-0800	28,000	360		44,800

BIT DATA

BIT DATA																			
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
1	17.500	HTC	MX-05	417	S96JM	4	X	28	137		1626	71.00	22.9	Y	30-120	20	2	6	1
													#VALUE!						
													#DIV/0!						
													#DIV/0!						
STOP TIME																			

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ³	ECD	67 spm	76 spm	100 spm	
1	National	6"	8.5	2.96	110	310			1125	225			1			
2	National	6"	8.5	2.96	110	330							2			
3	National	6"	8.5	2.96									3			

SLOW PUMP

	67 spm	76 spm	100 spm
1			
2			
3			

DRILL STRING

DRILL STRING				
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
BIT - 17.5"		1.50	X-OVER	2.600
MUD MOTOR - 2 Deg.		27.74	3.625 HSW	180.160
X-OVER=FLOAT SUB		3.05	X-OVER	1.460
14.75" IBS		5.66	14-5"HSW	427.230
UBHO		2.29	JARS	32.680
MONEL - SD37716		30.89	3-5"HSW	90.240
MONEL - 228126		30.66	T-BHA. =	848.180
SHOCK SUB - 580002		11.82		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROY. TORQUE
100	55	110	95	235

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
SHOWS			ROP (FT/HR)
GAS UNITS	FROM	TO	
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,839	17	5,856	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Narren	918-645-6671
Last BOP Test	
Next BOP Test	
Last Safety Meeting	9/9
Last BOP Drill	9/3
Last Operate Pipe Ram	
Last Operate Blind Ram	
Last Operate Annular	
LAST CASING	NEXT CASING
20" @ 120'	13.375 @ 2500

SURVEYS

[illegible]

DAILY ACTIVITY

LAST 24 HOURS:			
FROM			
0:00	12:00	12.00	DRILL FROM 1495' TO 1684'
12:00	13:00	1.00	LOST 100% RETURNS—MIX PUMP HIGH VIS & LCM PILLS REGAIN CIRC. - LOST APPROX. 550 BBLS
13:00	17:30	4.50	DRILL FROM 1684' TO 1772' —APPROX 90% RETURNS
17:30	19:30	2.00	BUILD VOLUME - MIX SUCTION TANK WITH 90 VIS - 40% LCM - PUMP & SPOT ABOVE 1675' = 225 BBLS
19:30	22:30	3.00	TRIP OUT TO CHANGE OUT MWD.—PACKED OFF WITH LCM
22:30	0:00	1.50	CHANGE OUT MWD.—TEST SAME

CONFIDENTIAL

Daily Total	24.00
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Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine G&O Co or Unit, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR			
09/08/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-30034	RD REBSOM			
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH		
3	DRILLING	1,495	453	23.50	19.3	Arapian	7170 md		

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.4	28+	NC	2/32	8.0	TR	6.00	3	4	4/5	1200	9-8--0800	29,000	380		47,850

BIT DATA

BIT DATA																			
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
																	T	B	G
1	17.500	HTC	MX-05	417	S96JM	4	X	28	137		1348	54.50	24.7	Y	30-120	20			
													#VALUE!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

HYDRALOG															67 spm	76 spm	100 spm
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD					
1	National	6"	8.5	2.96	110	310			1125	225			1				
2	National	6"	8.5	2.96	110	330							2				
3	National	6"	8.5	2.96									3				

SLOW PUMP

	67 spm	76 spm	100 spm
1			
2			
3			

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
BIT - 17.5"		1.50	X-OVER	2.600
MUD MOTOR - 2 Deg.		27.74	5.625 HSW	180.160
X-OVER=FLOAT SUB		3.05	X-OVER	1.460
14.75" IBS		5.66	14-5"HSW	427.230
UBHO		2.29	JARS	32.680
MONEL - SD37716		30.89	3-5"HSW	90.240
MONEL - 228126		30.66	T-BHA. =	848.180
SHOCK SUB - 580002		11.82		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
78	55	84	75	215

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,839	17	5,856	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Nurren	918-645-6671
Last BOP Test	
Next BOP Test	
Last Safety Meeting	9/7
Last BOP Drill	9/3
Last Operate Pipe Ram	
Last Operate Blind Ram	
Last Operate Annular	
LAST CASING	NEXT CASING
20" @ 120'	13.375 @ 2500

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
1,147	6.70	261.90	1145	57	1	-57	1.76	MWD	1,336	9.00	250.80	1332	82	-6	-82	1.20	MWD
1,241	7.90	252.80	1238	69	-2	-69	1.77	MWD	1,430	9.80	256.80	1425	97	-10	-97	1.34	MWD

DAILY ACTIVITY

[illegible]

(918) 599-9400

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine G&O Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	AP#	SUPERVISOR			
09/07/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-30034	RD REBSOM			
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH	
2	DRILLING		1,042	630	23.50	26.8	Arapian	7170 md	

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.3	28	NC	2/32	9.0	TR	4.25	2	4	3/5	618	9-7-0800	31,000	51150		51,150

BIT DATA

BIT DATA																			
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
1	17.500	HTC	MX-05	417	S96JM	4	X	28	137		895	31.00	28.9	Y	30-120	20			
													#VALUE!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

HYDRALOG																
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		67 spm	76 spm	100 spm
1	National	6"	8.5	2.96	110	310			1125	225			1			
2	National	6"	8.5	2.96									2			
3	National	6"	8.5	2.96	110	310							3			

SLOW PUMP

[illegible]

DRILL STRING

DRILL STRING					RIG INFO			
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY
BIT - 17.5"		1.50	X-OVER	2.600				
MUD MOTOR - 2 Deg.		27.74	3.625 HSW	180.160				
X-OVER=FLOAT SUB		3.05	X-OVER	1.460				
14.75" IBS		5.66	14-5"HSW	427.230	GAS DATA			
UBHO		2.29	JARS	32.680	BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
MONEL - SD37716		30.89	3-5"HSW	90.240	SHOWS			
MONEL - 228126		30.66	T-BHA. =	848.180	GAS UNITS	FROM	TO	ROP (FT/HR)
SHOCK SUB - 580002		11.82						
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
78	55	84	75	215	5,839	17	5,856	

RIG INFO	
Rig No	Unit 111
Cell Narren	918-645-6671
Last BOP Test	
Next BOP Test	
Last Safety Meeting	9/6
Last BOP Drill	9/3
Last Operate Pipe Rammer	
Last Operate Blind Rammer	
Last Operate Annular	
LAST CASING	NEXT CASING
20" @ 120'	13.375 @ 2500'

GEOLOGIC

GENERAL INFO

RIG INFO

DRILL STRING					LOGS				RIG INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY		
BIT - 17.5"		1.50	X-OVER	2.600					Rig No	Unit 111
MUD MOTOR - 2 Deg.		27.74	3.625 HSW	180.160					Cell Narren	918-645-6671
X-OVER=FLOAT SUB		3.05	X-OVER	1.460					Last BOP Test	
14.75" IBS		5.66	14-5"HSW	427.230	BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test	
UBHO		2.29	JARS	32.680					Last Safety Meeting	9/6
MONEL - SD37716		30.89	3-5"HSW	90.240	SHOWS				Last BOP Drill	9/3
MONEL - 228126		30.66	T-BHA. =	848.180	GAS UNITS	FROM	TO	ROP (FT/HR)	Last Operate Pipe Ran	
SHOCK SUB - 580002		11.82							Last Operate Blind Ra	
									Last Operate Annular	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	LAST CASING	NEXT CASING
78	55	84	75	215	5,839	17	5,856		20" @ 120'	13.375 @ 2500'

SURVEYS

MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
530	3.30	260.90	530	13	-2	-13	1.97	MWD	835	3.60	288.10	834	33	0	-33	1.25	MWD
683	3.70	279.30	682	23	-2	-23	2.43	MWD	982	4.10	274.40	981	42	2	-42	2.94	MWD

DAILY ACTIVITY

[illegible]

DAILY DRILLING REPORT

Operator: Wolverine G&O Co of Utah, LLC

24 hrs - midnight to midnight

Operator: Wolverine G&O Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR			
09/06/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-30034	RD REBSOM			
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH		
1	Drilling	402	265	7.50	35.3	Arapian	7170 md		

MUD DATA

[illegible]

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
1	17.500	HTC	MX-05	417	S96JM	4	X	28	137		265	7.50	35.3	Y	30-120	20			
													#VALUE!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		67 spm	76 spm	100 spm
1	National	6"	8.5	2.96	110	310			1125	225			1			
2	National	6"	8.5	2.96	110	310							2			
3	National	6"	8.5	2.96									3			

SLOW PUMP

		67 spm	76 spm	100 spm
1				
2				
3				

DRILL STRING

BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.
BIT - 17.5"	1.50	X-OVER	2.600
MUD MOTOR - 2 Deg.	27.74	5.625 HSW	239.730
X-OVER=FLOAT SUB	3.05	X-OVER	1.460
14.75" IBS	5.66	14-5"HSW	
UBHO	2.29	JARS	
MONEL - SD37716	30.89	3-5"HSW	
MONEL - 228126	30.66		
SHOCK SUB - 580002	11.82		
STRING WT.	BHA WT.	PU WT.	SO WT.
			ROT. TORQUE

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Arapiean			
Twin Creek			
Navajo			
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,839	17	5,856	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Narren	918-645-6671
Last BOP Test	
Next BOP Test	
Last Safety Meeting	9/5
Last BOP Drill	
Last Operate Pipe Ram	
Last Operate Blind Ram	
Last Operate Annular	
LAST CASING	NEXT CASING
20" @ 120'	13.375 @ 2500

SURVEYS

[illegible]

DAILY ACTIVITY

LAST 24 HOURS:			
FROM			
0:00	7:00	7.00	Rig up Nipple up 20" rotating head
7:00	11:00	4.00	PU tools
11:00	13:00	2.00	Drill 137 to 188
13:00	17:00	4.00	Work on pumps
17:00	19:00	2.00	Drill 188 to 277
19:00	20:30	1.50	POOH change MWD
20:30	0:00	3.50	Drill & survey 277 to 402

CONFIDENTIAL

[illegible]

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine G&O Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR			
09/05/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-30034	RD REBSOM			
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH		
0	Rig up	137	0	0.00	#DIV/0!	Arapian	7170 md		

MUD DATA

[illegible]

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
													#VALUE!						
													#VALUE!						
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			67 spm	76 spm	100 spm
1	National	6"	8.5	2.96									1				
2	National	6"	8.5	2.96									2				
3	National	6"	8.5	2.96									3				

SLOW PUMP

HYDRAULICS														67 spm	76 spm	100 spm
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD				
1	National	6"	8.5	2.96									1			
2	National	6"	8.5	2.96									2			
3	National	6"	8.5	2.96									3			

DRILL STRING

DRILL STARTS					RIG INFO				
BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	Rig No	Unit 111
				Arapiean				Cell Narren	918-645-6671
				Twin Creek				Last BOP Test	
				Navajo				Next BOP Test	
				GAS DATA				Last Safety Meeting	9/5
				BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS	Last BOP Drill	
				SHOWS				Last Operate Pipe Ram	
				GAS UNITS	FROM	TO	ROP (FY/HR)	Last Operate Blind Ram	
								Last Operate Annular	
								LAST CASING	NEXT CASING
Total BHA:	997.98			GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	20" @ 120'	13.375 @ 2500'
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE					
					5,839	17	5,856		

GEOLOGIC

GENERAL INFO

DRILL STRING					GEOLOGIC				RIG INFO	
BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY			
				Arapiean				Rig No	Unit 111	
				Twin Creek				Cell Narren	918-645-6671	
				Navajo				Last BOP Test		
				BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Next BOP Test		
								Last Safety Meeting	9/5	
						SHOWS		Last BOP Drill		
				GAS UNITS	FROM	TO	ROP (FY/HR)	Last Operate Pipe Ram		
								Last Operate Blind Ram		
								Last Operate Annular		
Total BHA:	997.98							LAST CASING	NEXT CASING	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG		
					5,839	17	5,856			
								20" @ 120'	13.375 @ 2500'	

SURVEYS

[illegible]

DAILY ACTIVITY

FROM			LAST 24 HOURS:
0:00	1:00	1.00	SET OUT BOP - INSTALL NIGHT CAP - RELEASE RIG @ 0100 HRS. 9/5/2005
1:00	8:00	7.00	RIG DOWN
8:00	17:00	9.00	SKID RIG FROM WF 20-1 TO WF 18-1
17:00	0:00	7.00	RIG UP

~~CONFIDENTIAL~~

Daily Total	24.00	
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EXACT Engineering, Inc.

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E.
Registered Professional Engineer
stevehash@exactengineering.com

CONFIDENTIAL PLEASE!

CONFIDENTIAL

September 19, 2005

Mr. Dustin Doucet
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re: Wolverine Federal 18-1 well
Sec 17 T23S R01W
Sevier Co, UT
API# 43-041-30034

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily drilling reports for the subject well from September 12, 2005 through September 18, 2005. Our present depth is 4,049 feet.
We respectfully request that the enclosed information remain confidential.

Very Truly Yours,



Chris Nicely
Engineering Technician

Enclosures

copy without enclosures via email to:
Wolverine Gas & Oil Co of Utah, LLC: Helene Bardolph
EXACT Engineering, Inc. well file

RECEIVED

SEP 21 2005

DIV. OF OIL, GAS & MINING

Petroleum Engineering Consulting, Personnel & Jobsite Supervision
complete well design, construction & management, drilling, completion, production, pipelines, appraisals,
due diligence, acquisitions, procedures, temporary personnel and field supervision

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine Gas Co of Utah, LLC								
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR	
09/18/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-300343		RD REBSOM	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
13	Drilling		4,049	374'	23.50	15.9	Arapian	7170 md

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.5	31	NC	2/32	10.0	0.25	3.00	3	12	5/7	3785	9/18--0800	100,000	3160		165,000

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
3	12.250	SMITH	F-2	537	YD5128	24	24	24	2001	3271	1270	59.50	21.3	Y	30-105	35	4	8	1/8"
4	12.250	REED	HP-53AKCF		PB4764	24	24	24	3271		778	46.00	16.9	Y	30-105	35			
													#DIV/0!						
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HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		67 sgm	76 sgm	100 sgm
1	National	6"	8.5	2.96	125	335	134	237	1495	200			1	125		
2	National	6"	8.5	2.96									2		206	
3	National	6"	8.5	2.96	125	335							3			425

SLOW PUMP

		67 spm	76 spm	100 spm
1		125		
2			206	
3				425

DRILL STRING

DRILL STRING				
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
12.25" - BIT		1.50	X-OVER	2.600
MUD MOTOR-2.25 H		22.48	6.625 HSW	180.160
FLOAT SUB-X-OVER		2.94	X-OVER	1.460
UVHO -- SUB		1.97	14-5"HSW	427.230
			JARS	32.680
MONEL - SD37716		30.89	3-5"HSW	90.240
MONEL - 228126		30.66	T-BHA. =	836.630
SHOCK SUB - 580002		11.82		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
130	55	152	118	175

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Arapiean			
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
80 in.			
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5 839	17	5,856	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Narren	918-645-6671
Last BOP Test	9/13
Next BOP Test	10/13
Last Safety Meeting	9/18
Last BOP Drill	9/17
Last Operate Pipe Ram	9/18
Last Operate Blind Ram	9/16
Last Operate Annular	9/17
LAST CASING	NEXT CASING
13.375 @ 2001	9.625

SURVEYS

MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
3,739	23.50	257.70	3553	896	-332	-896	2.34	MWD	3,928	25.30	262.30	3725	972	-346	-972	1.28	MWD
3,834	24.10	259.40	3640	933	-340	-933	0.96	MWD	4,023	26.70	263.50	3811	1013	-351	-1013	1.47	MWD

DAILY ACTIVITY

[illegible]

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~~DIV. OF OIL, GAS & MINING~~

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine Gas Co. of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR		
09/17/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-300343		RD REBSOM		
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH	
12	Drilling		3,675	404	22.50	17.6	Arapian	7170 md	

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.5	29	NC	1/32	9.0	tr	3.50	2	1	1/2	3386	9/17---0800	90,000	2460		148,500

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
3	12.250	SMITH	F-2	537	YD5128	24	24	24	2001	3271	1270	59.50	21.3	Y	30-105	35	4	8	1/8"
4	12.250	REED	HP-53AKCF		PB4764	24	24	24	3271		404	22.50	17.6	Y	30-105	35			
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HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		67 spm	76 spm	100 spm
1	National	6"	8.5	2.96	125	335	134	237	1495	200			1	125		
2	National	6"	8.5	2.96									2		206	
3	National	6"	8.5	2.96	125	335							3			425

SLOW PUMP

		67 spm	76 spm	100 spm
1		125		
2			206	
3				425

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
12.25" - BIT		1.50	X-OVER	2.600
MUD MOTOR-2.25 H		22.48	6.625 HSW	180.160
FLOAT SUB-X-OVER		2.94	X-OVER	1.460
UVHO -- SUB		1.97	14-5"HSW	427.230
			JARS	32.680
MONEL - SD37716		30.89	3-5"HSW	90.240
MONEL - 228126		30.66	T-BHA. =	836.630
SHOCK SUB - 580002		11.82		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
125	55	148	112	166

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Arapiean			
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
72 min.			
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,839	17	5,856	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Noren	918-645-667
Last BOP Test	9/13
Next BOP Test	10/13
Last Safety Meeting	9/17
Last BOP Drill	9/17
Last Operate Pipe Ram	9/15
Last Operate Blind Ram	9/16
Last Operate Annular	9/17
LAST CASING	NEXT CASING
13.375 @ 200'	9.625

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
3,362	28.80	249.90	3213	741	-281	-741	1.63	MWD	3,550	25.50	249.30	3382	819	-310	-819	0.48	MWD
3,456	25.90	249.80	3296	781	-296	-781	3.09	MWD	3,645	25.20	254.30	3467	858	-323	-857	2.27	MWD

DAILY ACTIVITY

[illegible]

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DIV. OF OIL, GAS & MINING

DAILY DRILLING REPORT

24 hrs - midnight to midnight

~~DIV. OF OIL, GAS & MINING~~

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	AP#	SUPERVISOR	
09/15/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-300343	RD REBSOM	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
10	DRILLING	3,130	343	20.00	17.2	Arapian	7170 md

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.3	28	NC	tr	9.8	tr	2.50	1	0	0/1	2905	9/15---0800	71,000	1140		117,115

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
3	12.250	SMITH	F-2	537	YD5128	24	24	24	2001		1129	48.50	23.3	Y	30-105	35			
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													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		67 spm	76 spm	100 spm
1	National	6"	8.5	2.96	125	335	134	237	1375	200			1	125		
2	National	6"	8.5	2.96									2		206	
3	National	6"	8.5	2.96	125	335							3			425

SLOW PUMP

		67 spm	76 spm	100 spm
1	125			
2		206		
3				425

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
12.25" - BIT		1.50	X-OVER	2.600
MUD MOTOR-2.25 H		22.48	6.625 HSW	180.160
FLOAT SUB-X-OVER		2.94	X-OVER	1.460
UVHO -- SUB		1.97	14-5"HSW	427.230
			JARS	32.680
MONEL - SD37716		30.89	3-5"HSW	90.240
MONEL - 228126		30.66	T-BHA. =	836.630
SHOCK SUB - 580002		11.82		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
125	55	148	112	158

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Araplean			
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
72 min.			
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,839	17	5,856	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Naren	918-645-6671
Last BOP Test	9/13
Next BOP Test	10/13
Last Safety Meeting	9/15
Last BOP Drill	9/14
Last Operate Pipe Ram	9/15
Last Operate Blind Ram	9/13
Last Operate Annular	9/13
LAST CASING	NEXT CASING
13.375 @ 2001	9.625

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
2,795	27.70	244.50	2710	532	-188	-498	1.21	MWD	2,984	27.50	250.30	2876	621	-220	-581	1.27	MWD
2,889	28.70	250.10	2792	576	-205	-539	3.01	MWD	3,078	25.40	247.00	2960	663	-235	-620	2.73	MWD

DAILY ACTIVITY

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DIV. OF OIL, GAS & MINING

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
9/14/005	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-300343	RD REBSOM	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
9	DRILLING	2,787	618	23.50	26.3	Arapian	7170 md

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
8.9	28	NC	0	10.0	tr	1.25	1	0	0/1	2403	9/14/08:00	50,000	580		82,500

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
3	12.250	SMITH	F-2	537	YD5128	24	24	24	2001		786	28.50	27.6	Y	30-105	30			
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			67 spm	76 spm	100 spm
1	National	6"	8.5	2.96	125	335			1375	200			1		125		
2	National	6"	8.5	2.96									2			206	
3	National	6"	8.5	2.96	125	335							3				425

SLOW PUMP

HYDRAULICS														67 spm	76 spm	100 spm
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD				
1	National	6"	8.5	2.96	125	335			1375	200			1	125		
2	National	6"	8.5	2.96									2		206	
3	National	6"	8.5	2.96	125	335							3			425

DRILL STRING

DRILL STRING					FORMATION				MD		TVD		LITHOLOGY		RIG INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.											Rig No	Unit 111
12.25" - BIT		1.50	X-OVER	2.600	Arapiean										Cell Narren	918-645-6671
MUD MOTOR-2.25 H		22.48	5.625 HSW	180.160											Last BOP Test	9/13
FLOAT SUB-X-OVER		2.94	X-OVER	1.460											Next BOP Test	10/13
			14-5"HSW	427.230	BOTTOMS UP TIME		BG GAS		CONN GAS		TRIP GAS				Last Safety Meeting	9/14
			JARS	32.680											Last BOP Drill	9/14
MONEL - SD37716		30.89	3-5"HSW	90.240	GAS UNITS		FROM		TO		ROP (FT/HR)				Last Operate Pipe Ran	9/13
MONEL - 228126		30.66	T-BHA. =												Last Operate Blind Ra	9/13
SHOCK SUB - 580002		11.82													Last Operate Annular	9/13
															LAST CASING	NEXT CASING
STRING WT.	BHA WT.	PU WT.	SO WT.	ROY. TORQUE	GRD. ELEVATION		GL TO KB		KB ELEVATION		INTERMEDIATE CSG				13.375 @ 200'	9.625
115	55	125	105	100	5,839		17		5,856							

GEOLOGIC

DRILL STRING					FORMATION				MD		TVD		LITHOLOGY		RIG INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.											Rig No	Unit 111
12.25" - BIT		1.50	X-OVER	2.600	Arapiean										Cell Narren	918-645-6671
MUD MOTOR-2.25 H		22.48	5.625 HSW	180.160											Last BOP Test	9/13
FLOAT SUB-X-OVER		2.94	X-OVER	1.460											Next BOP Test	10/13
			14-5"HSW	427.230	BOTTOMS UP TIME		BG GAS		CONN GAS		TRIP GAS				Last Safety Meeting	9/14
			JARS	32.680											Last BOP Drill	9/14
MONEL - SD37716		30.89	3-5"HSW	90.240	GAS UNITS		FROM		TO		ROP (FT/HR)				Last Operate Pipe Ran	9/13
MONEL - 228126		30.66	T-BHA. =												Last Operate Blind Ra	9/13
SHOCK SUB - 580002		11.82													Last Operate Annular	9/13
															LAST CASING	NEXT CASING
STRING WT.	BHA WT.	PU WT.	SO WT.	ROY. TORQUE	GRD. ELEVATION		GL TO KB		KB ELEVATION		INTERMEDIATE CSG				13.375 @ 200'	9.625
115	55	125	105	100	5,839		17		5,856							

GENERAL INFO

DRILL STRING					FORMATION				MD		TVD		LITHOLOGY		RIG INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.											Rig No	Unit 111
12.25" - BIT		1.50	X-OVER	2.600	Arapiean										Cell Narren	918-645-6671
MUD MOTOR-2.25 H		22.48	5.625 HSW	180.160											Last BOP Test	9/13
FLOAT SUB-X-OVER		2.94	X-OVER	1.460											Next BOP Test	10/13
			14-5"HSW	427.230	BOTTOMS UP TIME		BG GAS		CONN GAS		TRIP GAS				Last Safety Meeting	9/14
			JARS	32.680											Last BOP Drill	9/14
MONEL - SD37716		30.89	3-5"HSW	90.240	GAS UNITS		FROM		TO		ROP (FT/HR)				Last Operate Pipe Ram	9/13
MONEL - 228126		30.66	T-BHA. =												Last Operate Blind Ra	9/13
SHOCK SUB - 580002		11.82													Last Operate Annular	9/13
															LAST CASING	NEXT CASING
STRING WT.	BHA WT.	PU WT.	SO WT.	ROY. TORQUE	GRD. ELEVATION		GL TO KB		KB ELEVATION		INTERMEDIATE CSG				13.375 @ 200'	9.625
115	55	125	105	100	5,839		17		5,856							

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
2,417	24.40	243.30	2371	365	-112	-348	0.96	MWD
2,701	27.10	242.40	2626	489	-169	-459	0.53	MWD

DAILY ACTIVITY

[illegible]

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DIV. OF OIL, GAS & MINING

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine Gas Co of Utah, LLC								
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR	
09/13/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-300343		RD REBSOM	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
8	DRILLING		2,169	168	5.00	33.6	Arapian	7170 md

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
8.7	28	NC	0	9.5						9-13--2005		34,000	420		56,100

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
3	12.250	SMITH	F-2	537	YD5128	24	24	24	2001		168	5.00	33.6	Y	30-105	30			
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		67 spm	76 spm	100 spm
1	National	6"	8.5	2.96	125	335			1375	200			1	125		
2	National	6"	8.5	2.96									2		206	
3	National	6"	8.5	2.96	125	335							3			425

SLOW PUMP

		67 spm	76 spm	100 spm
1	125			
2		206		
3				425

DRILL STRING

DRILL STRING					RIG INFO			
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY
12.25" - BIT		1.50	X-OVER	2.600	SURFACE			
MUD MOTOR-2.25 H		22.48	5.625 HSW	180.160				
FLOAT SUB-X-OVER		2.94	X-OVER	1.460				
			14-5"HSW	427.230	GAS DATA			
			JARS	32.680	BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
					SHOWS			
MONEL - SD37716		30.89	3-5"HSW	90.240	GAS UNITS	FROM	TO	ROP (FT/HR)
MONEL - 228126		30.66	T-BHA. =					
SHOCK SUB - 580002		11.82						
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
105	55	109	100	168	5,839	17	5,856	
								LAST CASING
								NEXT CASING
								13.375 @ 2001
								9.625

GEOLOGIC

GENERAL INFO

SURVEYS

[illegible]

DAILY ACTIVITY

			LAST 24 HOURS:
FROM			
0:00	6:00	6.00	NIPPEL UP BOP
6:00	10:30	4.50	TEST UPPER & LOWER KELLY VALVE-BLIND & PIPE RAMS-CHOKE MANIFOLD-HCR & CHOKE LINE VALVE-CHECK & KILL LINE VALVES-ALL 5-MIN @ 250 PSI & ALL 10 MIN @ 5000 PSI=ALL I ANNULAR-5 MIN @ 250 PSI & 10 MIN @ 2500 PSI=GOOD 13-3/8" SURFACE CASING-5 MIN @ 250 PSI & 30 MIN @ 1500 PSI=GOOD PRECHARED ALL KOOMEY BOTTELS TO 1100 PSI.
10:30	13:00	2.50	INSTALL WEAR BUSHING-CUT 145' DRILLING-CENTER BOPS.
13:00	15:00	2.00	PICKUP NEW BHA -TEST MWD OK.
15:00	17:00	2.00	TRIP IN --LAY 2 JTS. DOWN
17:00	19:00	2.00	DRILL FLOAT COLLAR - CEMENT - SHOE --- TAGGED CEMENT @ 1952'----FLOAT COLLAR @ 1959'
19:00	0:00	5.00	DRILL FROM 2001' TO 2169'
Daily Total		24.00	

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DIV. OF OIL, GAS & MINING

Engineering & Supervisi		EXACT Engineering, Inc.		(918) 599-9400	
Operator: Wolverine G&O Co of Utah, LLC		DAILY DRILLING REPORT		24 hrs - midnight to midnight	
DATE 09/12/05	WELL Wolverine Federal 18-1	CONTRACTOR Unit Rig #111	COUNTY, STATE Sevier, UT	SPUD DATE 9/6/05	API# 43-041-300343
DAYS F/SPUD 7	PRESENT OPERATIONS @ MIDNIGHT WELD ON 13-3/8" WELL HEAD	TOTAL DEPTH 2,001	PROGRESS 0	DRILLING TIME 0.00	ROP #DIV/0!
				FORMATION Arapian	AUTH. DEPTH 7170 md
MUD DATA					
WT	VIS.	WL	CK	PH	SAND
9.2	33	NC	2/32	7.5	TR
BIT DATA					
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.
3	12.250				
HYDRAULICS					
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM
1	National	6"	8.5	2.96	
2	National	6"	8.5	2.96	
3	National	6"	8.5	2.96	
GEOLOGIC					
FORMATION		MD	TVD	LITHOLOGY	
SURFACE					
GENERAL INFO					
Rig No		Unit 111			
Cell Nc		Darren 918-645-6671			
Last BOP Test					
Next BOP Test					
Last Safety Meeting		9/12			
Last BOP Drill		9/3			
Last Operate Pipe Rar					
Last Operate Blind Ra					
Last Operate Annular					
LAST CASING		NEXT CASING			
13.375 @ 2001		9.625			
SURVEYS					
MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-
NONE					
DAILY ACTIVITY					
FROM	TO	TIME	LAST 24 HOURS:		
0:00	6:00	6.00	RUN 13-3/8" SURFACE CASING = 13-3/8"--SHOE--1 JT. 13-3/8"--P-110--61#/FT.--ST&C--13-3/8"--FLOAT COLLAR--43--JTS--13-3/8"--P-110--61#/FT.--ST&C CASING--44--TOTAL JOINTS--SHOE SET @ 2001'		
			FLOAT COLLAR @ 1959'--RIG DOWN CASING CREW..		
6:00	9:30	3.50	RIG UP TO FILL & CIRC. CASING--WASH 28' TO BOTTOM-- 11'FILL--CIRC. CASING--GOOD RETURNS.		
9:30	10:00	0.50	SAFETY MEETING--RIG UP CEMENTERS--HALLABURTON		
10:00	12:30	2.50	CEMENT CASING START WITH 10 BBL.FRESH WATER--THEN--20 BBL. GEL SWEEP--THEN--10 BBL. FRESH WATER-- START LEAD CEMENT = 490 SKS.--CBM LIGHT--.25%/SK.FLOCELE,5#/SK.GILSONITE W/Rq.26.48--YEILD 4.13--Lbs/Gal 10.5--TAIL CEMENT = 380 SKS--TYPE"5" = 1%CALCIUM CHLORIDE .,25#FLOCELE--W/Rq.5.20--Yeild 4.13--Lbs/Gal 15.6--START DISPLACEMENT--FRESH WATER = 298.3 BBLS. BUMP PLUG--HELD GOOD--NO CEMENT TO SURFACE--LOST RETURNS WHILE DISP. PUMPED 265 BBLS @ TIME OF LOST RETURNS @ 6 BBL/MIN.--SLOWED PUMP RATE TO 3.5 BBL/MIN. PUMPED 33.3 BBLS TO FINISH DISP.--NO RETURNS		
12:30	13:30	1.00	RIG UP 80 FEET 1 INCH PIPE MIX--PUMP 4 BBLS OF 15.6# CEMENT WITH 3% CACL2 - 14SKS.		
13:30	15:00	1.50	WAIT ON CEMENT--TAGGED TOP OF CEMENT @ 62' BELOW SURFACE		
15:00	16:00	1.00	RUN 60' 1" PIPE IN - MIX & PUMP 175SKS. OF 15.6# CEMENT WITH 2.5% CACL2 CEMENT TO SURFACE		
16:00	20:00	4.00	WAIT ON CEMENT--CLEAN MUD TANKS--CEMENT @ SURFACE--DID NOT DROP--SAMPLES GOOD -HARD NIPPEL DOWN 20" - CUT OFF CASING- SET OUT ROTATING HEAD & CONDUCTOR - MAKE FINAL CUT- PREHEAT & WELD ON 13-3/8" WELL HEAD.		
20:00	0:00	4.00			
Daily Total	24.00				

SEP 21 2005

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DIV OF OIL, GAS & MINING

EXACT Engineering, Inc.

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E.
Registered Professional Engineer
stevehash@exactengineering.com

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September 26, 2005

Mr. Dustin Doucet
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re: Wolverine Federal 18-1 well
Sec 17 T23S R01W
Sevier Co, UT
API# 43-041-30034

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily drilling reports for the subject well from September 19, 2005 through September 25, 2005. Our present depth is 6,131 feet.
We respectfully request that the enclosed information remain confidential.

Very Truly Yours,



Chris Nicely
Engineering Technician

Enclosures

copy without enclosures via email to:
Wolverine Gas & Oil Co of Utah, LLC: Helene Bardolph
EXACT Engineering, Inc. well file

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SEP 28 2005

DIV. OF OIL & GAS ENGINEERING

Petroleum Engineering Consulting, Personnel & Jobsite Supervision
complete well design, construction & management, drilling, completion, production, pipelines, appraisals,
due diligence, acquisitions, procedures, temporary personnel and field supervision

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine G&O Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR		
09/25/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-300343		G. Urban		
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH	
20	Drilling		6,131	456	15.00	30.4	Arapian	7170 md	

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.8	32	NC	2/32	10.0	0.50	4.50	5	11	7/11	5675	9/25---0800	115,000	3320		189,750

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
5	12.250	REED	HP-53AKCP	537	PB4403	24	24	24	4746	5675	929	49.50	18.8	Y	30-105	40	7	5	-1/16
6	12.250	SEC	XS30S	537	10618960	24	24	24	5675		456	15.00	30.4	Y	30-105	40			
													#VALUE!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		67 spm	61 spm	71 spm
1	National	6"	8.5	2.96	125	335	134	237	1850	200			1	300		
2	National	6"	8.5	2.96									2		300	
3	National	6"	8.5	2.96	125	335							3			310

SLOW PUMP

		67 spm	61 spm	71 spm
1	300			
2		300		
3				310

DRILL STRING

DRILL CHARGE					FORMATION	MD	TVD	LITHOLOGY	RIG INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.					Rig No	Unit 111
12.25" - BIT		1.50	X-OVER	2.60	Arapiean				Cell Ncrrn	918-645-667
MUD MOTOR-2.25 H		31.10	6.625 HSW	180.16					Last BOP Test	9/13
FLOAT SUB-X-OVER		2.94	X-OVER	1.46					Next BOP Test	10/13
UVHO -- SUB		1.97	14-5"HSW	427.23	BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS	Last Safety Meeting	9/25
			JARS	32.68	80 ,in.				Last BOP Drill	9/23
MONEL - SD37716		30.89	3-5"HSW	90.24	SHOWS				Last Operate Pipe Rar	9/24
MONEL - 228126		30.66	T-BHA. =	845.25	GAS UNITS	FROM	TO	ROP (F1/HR)	Last Operate Blind Ra	9/24
SHOCK SUB - 5800020		11.82							Last Operate Annular	9/24
									LAST CASING	NEXT CASING
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	13.375 @ 2001	9.625
176	55	250	140	150	5,839	17	5,856			

GEOLOGIC

GENERAL INFO

SURVEYS

[illegible]

DAILY ACTIVITY

[illegible]

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THIS AM drilling @ 6230

~~SEP 28 2005~~

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine G&O Co of Utah, LLC

Operator: Wolverine G&O Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR		
09/24/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-300343		G. Urban		
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH	
19	Rig Repair		5,675	240	6.50	36.9	Arapian	7170 md	

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.8	33	NC	2/32	10.0	0.50	4.50	5	12	7/12	5675	9/24---0800	115,000	3320		189,750

BIT DATA

DRILL DATA																			
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
5	12.250	REED	HP-53AKCP	537	PB4403	24	24	24	4746	5675	929	49.50	18.8	Y	30-105	40	7	5	-1/16
6	12.250	SEC	XS30S	537	10618960	24	24	24	5675				#VALUE!	Y					
													#VALUE!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			68 spm	61 spm	71 spm
1	National	6"	8.5	2.96	125	335	134	237	1850	200			1		220		
2	National	6"	8.5	2.96									2			200	
3	National	6"	8.5	2.96	125	335							3				260

SLOW PUMP

	68 spm	61 spm	71 spm
1	220		
2		200	
3			260

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
12.25" - BIT		1.50	X-OVER	2.60
MUD MOTOR-2.25 H		31.10	3.625 HSW	180.16
FLOAT SUB-X-OVER		2.94	X-OVER	1.46
UVHO -- SUB		1.97	14-5"HSW	427.23
			JARS	32.68
MONEL - SD37716		30.89	3-5"HSW	90.24
MONEL - 228126		30.66	T-BHA. =	845.25
SHOCK SUB - 5800020		11.82		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
160	55	225	125	150

GEOLOGIC

FORMATION		MD	TVD	LITHOLOGY
Arapleean				
GAS DATA				
BOTTOMS UP TIME	BG GAS	CONN GAS		TRIP GAS
80 ,in.				
SHOWS				
GAS UNITS		FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION		INTERMEDIATE CSG
5,839	17	5,856		

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Ncrrn	918-645-6671
Last BOP Test	9/13
Next BOP Test	10/13
Last Safety Meeting	9/24
Last BOP Drill	9/23
Last Operate Pipe Rar	9/24
Last Operate Blind Ra	9/24
Last Operate Annular	9/24
LAST CASING	NEXT CASING
13.375 @ 2001	9.625

SURVEYS

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DAILY ACTIVITY

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SEP 28 2005

Q17 OF Q18 CLOSING

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine Gas Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR		
09/23/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-300343		G. Urban		
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH	
18	Drilling		5,435	395	23.50	16.8	Arapian	7170 md	

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.6	32	NC	2/32	10.0	0.50	4.75	4	8	5/8	5171	9/23---0800	86,000	3160		141,900

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd") or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
3	12.250	SMITH	F-2	537	YD5128	24	24	24	2001	3271	1270	59.50	21.3	Y	30-105	35	4	8	1/8"
4	12.250	REED	HP-53AKCP		PB4764	24	24	24	3271	4746	1475	94.00	15.7	Y	30-105	40	2	7	-1/8"
5	12.250	REED	HP-53AKCP	537	PB4403	24	24	24	4746		689	43.00	16.0	Y	30-105	40			
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		68 spm	61 spm	71 spm
1	National	6"	8.5	2.96	125	335	134	237	1850	200			1	220		
2	National	6"	8.5	2.96									2		200	
3	National	6"	8.5	2.96	125	335							3			260

SLOW PUMP

	68 spm	61 spm	71 spm
1	220		
2		200	
3			260

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
12.25" - BIT		1.50	X-OVER	2.6000
MUD MOTOR-2.25 H		22.48	3.625 HSW	180.1600
FLOAT SUB-X-OVER		2.94	X-OVER	1.4600
UVHO - SUB		1.97	14-5"HSW	427.2300
			JARS	32.6800
MONEL - SD37716		30.89	3-5"HSW	90.2400
MONEL - 228126		30.66	T-BHA. =	836.6300
SHOCK SUB - 5800020		11.82		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
160	55	225	125	150

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Arapleau			
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
80 .in.			
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,839	17	5,856	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Ncrrn	918-645-6671
Last BOP Test	9/13
Next BOP Test	10/13
Last Safety Meeting	9/23
Last BOP Drill	9/23
Last Operate Pipe Ram	9/21
Last Operate Blind Ram	9/21
Last Operate Annular	9/21
LAST CASING	NEXT CASING
13.375 @ 2001	9.625

SURVEYS

MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
5,093	25.60	236.00	4767	1459	-513	-1458	0.96	MWD	5,283	24.50	251.00	4938	1532	-549	-1532	4.13	MWD
5,188	26.60	243.00	4852	1495	-533	-1495	3.58	MWD	5,377	25.70	260.00	5023	1571	-559	-1571	4.08	MWD

DAILY ACTIVITY

[illegible]

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SEP 28 2005

CONCLUSION

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
09/22/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-300343	G. Urban	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
17	Drilling	5,040	184	11.50	16.0	Arapian	7170 md

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.7	33	NC	2/32	10.0	0.50	4.75	5	12	7/11	4853	9/22—0800	93,000	3240		145,200

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd" or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
																	T	B	G
3	12.250	SMITH	F-2	537	YD5128	24	24	24	2001	3271	1270	59.50	21.3	Y	30-105	35	4	8	1/8"
4	12.250	REED	HP-53AKCP		PB4764	24	24	24	3271	4746	1475	94.00	15.7	Y	30-105	40	2	7	-1/8"
5	12.250	REED	HP-53AKCP	537	PB4403	24	24	24	4746		294	19.50	15.1	Y	30-105	40			
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		67 spm	76 spm	71 spm
1	National	6"	8.5	2.96	125	335	134	237	1850	200			1	220		
2	National	6"	8.5	2.96									2			
3	National	6"	8.5	2.96	125	335							3			280

SLOW PUMP

		67 spm	76 spm	71 spm
1	220			
2				
3				280

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
12.25" - BIT		1.50	X-OVER	2.600
MUD MOTOR-2.25 H		22.48	5.625 HSW	180.160
FLOAT SUB-X-OVER		2.94	X-OVER	1.460
UVHO -- SUB		1.97	14-5"HSW	427.230
			JARS	32.680
MONEL - SD37716		30.89	3-5"HSW	90.240
MONEL - 228126		30.66	T-BHA. =	836.630
SHOCK SUB - 5800020		11.82		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
154	55	210	125	150

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Arapiean			
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
80 .in.			
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,839	17	5,856	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Ncrrren	918-645-6671
Last BOP Test	9/13
Next BOP Test	10/13
Last Safety Meeting	9/22
Last BOP Drill	9/21
Last Operate Pipe Ram	9/21
Last Operate Blind Ram	9/21
Last Operate Annular	9/21
LAST CASING	NEXT CASING
13.375 @ 2001	9.625

SURVEYS

[illegible]

DAILY ACTIVITY

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SEP 28 2005

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine Gas Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR		
09/21/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-300343		G. Urban		
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH	
16	Drilling		4,856	126	9.50	13.3	Arapian	7170 md	

MUD DATA

MOD DATA															
WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.6	30	NC	2/32	10.2	0.50	4.00	3	9	5/8	4746	9/21---0800	88,000	3100		145,200

BIT DATA

BPT DATA																			
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
3	12.250	SMITH	F-2	537	YD5128	24	24	24	2001	3271	1270	59.50	21.3	Y	30-105	35	4	8	1/8"
4	12.250	REED	HP-53AKCP		PB4764	24	24	24	3271	4746	1475	94.00	15.7	Y	30-105	40	2	7	-1/8"
5	12.250	REED	HP-53AKCP	537	PB4403	24	24	24	4746		110	8.00	13.8	Y	30-105	40			
													#DIV/0!						

HYDRAULICS

HYDRASICS																	
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			64 spm	76 spm	71 spm
1	National	6"	8.5	2.96	125	335	134	237	1495	200			1		220		
2	National	6"	8.5	2.96									2				
3	National	6"	8.5	2.96	125	335							3				300

SLOW PUMP

		64 spm	76 spm	71 spm
1		220		
2				
3				300

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
12.25" - BIT		1.50	X-OVER	2.600
MUD MOTOR-2.25 H		22.48	6.625 HSW	180.160
FLOAT SUB-X-OVER		2.94	X-OVER	1.460
UVHO -- SUB		1.97	14-5"HSW	427.230
			JARS	32.680
MONEL - SD37716		30.89	3-5"HSW	90.240
MONEL - 228126		30.66	T-BHA. =	836.630
SHOCK SUB - 5800020		11.82		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROY. TORQUE
145	55	195	125	150

GEOLOGIC

GEOTECH			
FORMATION	MD	TVD	LITHOLOGY
Arapiean			
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
80 ,in.			
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,839	17	5,856	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Nørrn	918-645-6671
Last BOP Test	9/13
Next BOP Test	10/13
Last Safety Meeting	9/21
Last BOP Drill	9/21
Last Operate Pipe Ram	9/21
Last Operate Blind Ra	9/21
Last Operate Annular	9/21
LAST CASING	NEXT CASING
13.375 @ 200'	9.625

SURVEYS

[illegible]

DAILY ACTIVITY

[illegible]

CONFIDENTIAL

SEP 28 2005

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR	
09/20/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-300343	G. Urban	
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH
15	Drilling	4,730	337	23.00	14.7	Arapian	7170 md

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
9.7	33	NC	2/32	10.0	0.50	4.20	4	9	6/8	4509	9/20--0800	95,000	3140		156,750

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
3	12.250	SMITH	F-2	537	YD5128	24	24	24	2001	3271	1270	59.50	21.3	Y	30-105	35	4	8	1/8"
4	12.250	REED	HP-53AKCF		PB4764	24	24	24	3271		1459	92.50	15.8	Y	30-105	40			
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		64 spm	76 spm	71 spm
1	National	6"	8.5	2.96	125	335	134	237	1495	200			1	220		
2	National	6"	8.5	2.96									2			
3	National	6"	8.5	2.96	125	335							3			300

SLOW PUMP

HYDRAULICS												NEW FORM				
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		64 spm	76 spm	71 spm
1	National	6"	8.5	2.96	125	335	134	237	1495	200			1	220		
2	National	6"	8.5	2.96									2			
3	National	6"	8.5	2.96	125	335							3			300

DRILL STRING

DRILL STRING					RIG INFO			
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY
12.25" - BIT		1.50	X-OVER	2.600	Arapiean			
MUD MOTOR-2.25 H		22.48	5.625 HSW	180.160				
FLOAT SUB-X-OVER		2.94	X-OVER	1.460				
UVHO -- SUB		1.97	14-5"HSW	427.230				
			JARS	32.680				
MONEL - SD37716		30.89	3-5"HSW	90.240				
MONEL - 228126		30.66	T-BHA. =	836.630				
SHOCK SUB - 580002		11.82						
STRING WT.		BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION
145		55	195	120	150	5,839	17	5,856

GEOLOGIC

GENERAL INFO

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
4,495	25.50	253.80	4233	1217	-395	-1217	2.29	MWD
4 590	27.20	249.40	4318	1257	-409	-1257	2.72	MWD

DAILY ACTIVITY

[illegible]

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THIS AM POOH FOR BIT

~~SECRET~~

SEP 28 2005

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine G&O Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR			
09/19/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-300343	RD REBSOM			
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH		
14	Drilling	4,393	344	23.50	14.6	Arapian	7170 md		

MUD DATA

MUD DATA											DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS							
9.7	32	NC	2/32	10.0	tr	4.00	4	9	5/7	4163	9/19---0800	100,000	3180			165,000

BIT DATA

BIT DATA																			
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
3	12.250	SMITH	F-2	537	YD5128	24	24	24	2001	3271	1270	59.50	21.3	Y	30-105	35	4	8	1/8"
4	12.250	REED	HP-53AKCF		PB4764	24	24	24	3271		1122	69.50	16.1	Y	30-105	40			
													#DIV/0!						
													#DIV/0!						

HYDRAULICS

HYDRALISC													67 spm	76 spm	100 spm
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD			
1	National	6"	8.5	2.96	125	335	134	237	1495	200			1	125	
2	National	6"	8.5	2.96									2		206
3	National	6"	8.5	2.96	125	335							3		425

SLOW PUMP

HYDRAULICS														67 spm	76 spm	100 spm
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECO				
1	National	6"	8.5	2.96	125	335	134	237	1495	200			1	125		
2	National	6"	8.5	2.96									2		206	
3	National	6"	8.5	2.96	125	335							3			425

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
12.25" - BIT		1.50	X-OVER	2.600
MUD MOTOR-2.25 H		22.48	3.625 HSW	180.160
FLOAT SUB-X-OVER		2.94	X-OVER	1.460
UVHO -- SUB		1.97	14-5"HSW	427.230
			JARS	32.680
MONEL - SD37716		30.89	3-5"HSW	90.240
MONEL - 228126		30.66	T-BHA. =	836.630
SHOCK SUB - 580002		11.82		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
130	55	152	118	175

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Arapiean			
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
80 ,in.			
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,839	17	5,856	

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Narren	918-645-6671
Last BOP Test	9/13
Next BOP Test	10/13
Last Safety Meeting	9/19
Last BOP Drill	9/17
Last Operate Pipe Ram	9/19
Last Operate Blind Ram	9/16
Last Operate Annular	9/17
LAST CASING	NEXT CASING
13.375 @ 2001	9.625

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
4,117	26.70	261.70	3895	1055	-357	-1055	0.86	MWD	4,306	26.60	258.00	4064	1137	-371	-1137	1.37	MWD
4,212	25.70	260.10	3980	1096	-363	-1096	1.29	MWD	4,401	27.00	250.30	4149	1178	-383	-1178	3.68	MWD

DAILY ACTIVITY

[illegible]

Daily Total	24.00
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~~SEP 28 2005~~

~~CONFIDENTIAL~~

RECEIVED

CONCLUSIONS & REMARKS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other

2. Name of Operator **Wolverine Gas & Oil Co of Utah, LLC**

3a. Address
One Riverfront Plaza, 55 Campau NW, Grand Rapids, MI

3b. Phone No. (include area code)
616-458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface hole location - 829' FSL & 1,928 FWL, SE/SW, Section 17, T23S, R1W
Bottom hole location - 200' FSL & 175' FEL, SE/SE Section 18, T23S, R1W

5. Lease Serial No.

UTU-73528

6. If Indian, Allottee or Tribe Name

N/A

7. If Unit or CA/Agreement, Name and/or No.

Wolverine Fed Exploration Unit

8. Well Name and No.

Wolverine Federal #18-1

9. API Well No.

4304130034

10. Field and Pool, or Exploratory Area

Covenant Field

11. County or Parish, State

Sevier Co, UT

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other suspend operations
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Production casing was set October 1, 2005, and drilling operations are completed.

Further operations on the subject well have been temporarily suspended.

It is estimated that completion operations will begin approximately November 1, 2005, or as soon thereafter as a completion rig becomes available.

xc: DOGM

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

George C. Nicely

Title **Engineering Technician - EXACT Engineering Inc**

Signature

George C. Nicely

Date

10/03/2005

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

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OCT 06 2005

DIV. OF OIL, GAS & MINING

EXACT Engineering, Inc.

www.exactengineering.com

415 S. Boston Ave., Suite 734, Tulsa, OK 74103 • (918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E.
Registered Professional Engineer
stevehash@exactengineering.com

CONFIDENTIAL PLEASE!

CONFIDENTIAL

October 3, 2005

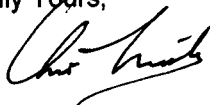
Mr. Dustin Doucet
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re: Wolverine Federal 18-1 well
Sec 17 T23S R01W
Sevier Co, UT
API# 43-041-30034

Dear Mr. Doucet,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please find enclosed daily drilling reports for the subject well from September 26, 2005 through October 2, 2005. We have reached a total depth of 7,130' and ran and cemented 7" production casing. We respectfully request that the enclosed information remain confidential.

Very Truly Yours,



Chris Nicely
Engineering Technician

Enclosures

copy without enclosures via email to:
Wolverine Gas & Oil Co of Utah, LLC: Helene Bardolph
EXACT Engineering, Inc. well file

RECEIVED

OCT 06 2005

DIV. OF OIL, GAS & MINING

Petroleum Engineering Consulting, Personnel & Jobsite Supervision
complete well design, construction & management, drilling, completion, production, pipelines, appraisals,
due diligence, acquisitions, procedures, temporary personnel and field supervision

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine G&O Co of Utah, LLC

Operator: Wolverine G&O Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR			
10/02/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-30034	G. Urban			
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH	
27	Rig down for move		7,130				Navajo	7170 md	

MUD DATA

[illegible]

BIT DATA

BIT DATA															DULL CONDITION			
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA		IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	T	B	G
												#DIV/0!						
												#VALUE!						
												#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		66 spm	59 spm	71 spm
1	National	6"	8.5	2.96									1			
2	National	6"	8.5	2.96									2			
3	National	6"	8.5	2.96									3			

SLOW PUMP

	66 spm	59 spm	71 spm
1			
2			
3			

DRILL STRING

DRILL STRING					FORMATION				MD		TVD		LITHOLOGY		RIG INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.												
					Twin Creek		6,108		5,681						Rig No	Unit 111
					Navajo		6,470		6,034		LS-10-100%SS-90-10				Cell Nc	918-645-667
															Last BOP Test	9/13
															Next BOP Test	10/13
															Last Safety Meeting	10/2
															Last BOP Drill	
															Last Operate Pipe Ran	
															Last Operate Blind Ran	
															Last Operate Annular	
															Last Casing	Next Casing
STRING WT.	BHA WT.	PU WT.	SO WT.	ROY. TORQUE	GRD. ELEVATION		GL TO KB		KB ELEVATION		INTERMEDIATE CSG		13.375 @ 2001		7"	
					5,839		17		5,856		9 5/8 @ 6277.80					

GEOLOGIC

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Nc	918-645-667
Last BOP Test	9/13
Next BOP Test	10/13
Last Safety Meeting	10/2
Last BOP Drill	
Last Operate Pipe Ram	
Last Operate Blind Ram	
Last Operate Annular	
LAST CASING	NEXT CASING
13.375 @ 2001	7"

SURVEYS

[illegible]

DAILY ACTIVITY

FROM			LAST 24 HOURS:
0:00	:30	0.50	HSM WITH HALLIBURTON CEMENTERS, TEST LINES TO 5000 PSI.
0:30	2:00	1.50	RIG UP & CEMENT, PUMP 10 BBL KCL-20 BBL SUPERFLUSH-10 BBL KCL.FOLLOWED BY
			190 SKS.G-50/50 POZ 2%GEL,5%SALT,5#/SK GILSONITE,.3%HALAD-344,.2%SUPER CBL
			W/Rq 7.18 YEILD 1.23 LBS/GAL 14.4 DISPLACE 278 BBLS H2O BUMP PLUG 1000 PSI = 500 OVER
			PLUG HELD . GOOD CIRC. THREW OUT CEMENT JOB.
2:00	4:00	2.00	WOC NIPPLE DOWN BOP
4:00	10:00	6.00	TRANSFER MUD - CLEAN MUD TANKS - SET OUT KELLY - SUBS - FOR INSPECTION
			SET SLIPS @ 150,000 - CUT CASING 12" ABOVE SLIPS
			RIG RELEASE @ 10:00 HRS. ON 10/2/05
10:00	0:00	14.00	RIG DOWN FOR MOVE TO TWIST CANYON
			INSPECT HEAVY WEIGHT PIPE AND MONELS
			THIS AM:Rig down to move
Daily Total		24.00	

CONFIDENTIAL

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DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine G&O Co of Utah, LLC

Operator: Wolverine G&O Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR			
10/01/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-30034	G. Urban			
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH	
26	Rig up to cement		7,130				Navajo	7170 md	

MUD DATA

MUD DATA															
WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
8.5	36	NC	1/32	10.0	tr	1.25	5	11	5/10	7130	9/29--0800	5,000	200	##	8,250

BIT DATA

BIT DATA																			
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
																	T	B	G
													#DIV/0!						
													#DIV/0!						
													#VALUE!						
													#DIV/0!						

HYDRAULICS

HYDRALOG												66 spm			59 spm			71 spm		
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD								
1	National	6"	8.5	2.96	125	335	175	175	1110	180			1							
2	National	6"	8.5	2.96									2							
3	National	6"	8.5	2.96	125								3							

SLOW PUMP

	66 spm	59 spm	71 spm
1			
2			
3			

DRILL STRING

DRILL STRING									RIG INFO	
BOTTOMHOLE ASSEMBLY	LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	Rig No Unit 111		
				Twin Creek	6,108	5,681		Cell Nc 918-645-6671		
				Navajo	6,470	6,034	LS-10-100%SS-90-10	Last BOP Test 9/13		
								Next BOP Test 10/13		
								Last Safety Meeting 10/1		
								Last BOP Drill 9/30		
								Last Operate Pipe Rar 10/1		
								Last Operate Blind Ra 10/		
								Last Operate Annular 10/1		
								LAST CASING NEXT CASING		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG		
185	42	270	145	140	5,839	17	5,856	9 5/8 @ 6277.80	13.375 @ 2001	7"

GEOLOGIC

GENERAL INFO

SURVEYS

[illegible]

DAILY ACTIVITY

[illegible]

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine G&O Co of Utah, LLC

Operator: Wolverine G&O Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR			
09/30/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-30034	G. Urban			
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT	TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH		
25	logging	7,130				Navajo	7170 md		

MUD DATA

MUD DATA															
WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
8.5	36	NC	1/32	10.0	tr	1.25	5	11	5/10	7130	9/29--0800	5,000	200	##	8,250

BIT DATA

BIT DATA																			
BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
7	12.250	REED	EHP-53AFKP	537	MT8449	24	24	24	6297	7130	833	37.50	22.2	Y	30-105	40	8	3	-1/8
													#DIV/0!						
													#VALUE!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		66 spm	59 spm	71 spm
1	National	6"	8.5	2.96	125	335	175	175	1110	180			1			
2	National	6"	8.5	2.96									2			
3	National	6"	8.5	2.96	125								3			

SLOW PUMP

		66 spm	59 spm	71 spm
1				
2				
3				

DRILL STRING

DRILL STRING					RIG INFO					
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	Rig No Unit 111	
					Twin Creek	6,108	5,661		Cell Nc 918-645-6671	
					Navajo	6,470	6,034	LS-10-100%SS-90-10	Last BOP Test 9/13	
					GAS DATA				Next BOP Test 10/13	
					BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS	Last Safety Meeting 9/30	
					42 mjn.	12-78			Last BOP Drill 9/30	
					SHOWS				Last Operate Pipe Ran 9/24	
					GAS UNITS	FROM	TO	ROP (FT/HR)	Last Operate Blind Ran 9/24	
									Last Operate Annular 9/24	
									LAST CASING NEXT CASING	
STRING WT.	BHA WT.	PU WT.	SO WT.	ROY. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	13.375 @ 2001 7"	
185	42	270	145	140	5,839	17	5,856	9 5/8 @ 6277.80		

GEOLOGIC

GENERAL INFO

SURVEYS

[illegible]

DAILY ACTIVITY

[illegible]

~~CONFIDENTIAL~~

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine Gas Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#		SUPERVISOR		
09/29/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-30034		G. Urban		
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH	
24	Drilling TD		7,130	592	23.50	25.2	Navajo	7170 md	

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
8.4	34	NC	1/32	9.5	tr	1.90	4	8	4/7	6700	9/29---0800	4,900	180	##	8,085

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
7	12.250	REED	EHP-53AFKP	537	MT8449	24	24	24	6297	7130	833	37.50	22.2	Y	30-105	40			
													#DIV/0!						
													#VALUE!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		66 spm	59 spm	71 spm
1	National	6"	8.5	2.96	125	335	175	175	1110	180			1	420		
2	National	6"	8.5	2.96									2		370	
3	National	6"	8.5	2.96	125								3			

SLOW PUMP

	66 spm	59 spm	71 spm
1	420		
2		370	
3			

DRILL STRING

DRILL STRING									RIG INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY	Rig No	Unit 111
8.5" - BIT		1.00	X-OVER	2.05	Twin Creek	6,108	5,681		Cell Nc	918-645-6671
MUD MOTOR-2.25 H		24.00			Navajo	6,470	6,034	LS-10-100%SS-90-10	Last BOP Test	9/13
FLOAT SUB-X-OVER		2.63							Next BOP Test	10/13
UVHO -- SUB		2.60	14-5"HSW	427.23	BOTTOMS UP TIME	BG GAS	GAS DATA CONN GAS	TRIP GAS	Last Safety Meeting	9/29
			JARS	32.68	42 mjn.	12-78			Last BOP Drill	9/29
MONEL - SD37716		31.04	3-5"HSW	90.24	SHOWS				Last Operate Pipe Ram	9/24
MONEL - 228126		31.02	T-BHA. =	644.49	GAS UNITS	FROM	TO	ROP (FT/HR)	Last Operate Blind Ram	9/24
									Last Operate Annular	9/24
									LAST CASING	NEXT CASING
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	13.375 @ 2001	7"
185	42	270	145	140	5,839	17	5,856	9 5/8 @ 6277.80		

GEOLOGIC

GENERAL INFO

SURVEYS

MD	INCL.	AZIMUTH	TVD	SECTION	N+ /S-	E+ /W-	DLS	TOOL	MD	INCL.	AZIMUTH	TVD	SECTION	N+ /S-	E+ /W-	DLS	TOOL
6,723	9.10	234.00	6282	2112	-695	-1995	0.43	MWD	7,069	8.60	235.00	6624	2162	-725	-2037	0.00	MWD
6,914	8.60	234.00	6469	2139	-711	-2017	0.33	MWD	7,090	8.50	233.00	6645	2165	-727	-2039	0.80	MWD

DAILY ACTIVITY

[illegible]

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THIS AM: POOH for logs

Operator: Wolverine G&O Co of Utah, LLC

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine Gas Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR			
09/28/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-30034	G. Urban			
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH	
23	Drilling		6,538	241	14.00	17.2	Arapian	7170 md	

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
8.4	32	NC	2/32	7.0	0.00	0.25	4	2	2/2	6297	9/28--0800	4,100	3480	##	6,765

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
7	12.250	REED	EHP-53AFKP	537	MT8449	24	24	24	6297		241	14.00	17.2	Y	30-105	40			
													#DIV/0!						
													#VALUE!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		67 spm	61 spm	71 spm
1	National	6"	8.5	2.96	125	335	175	175	1110	180			1			
2	National	6"	8.5	2.96									2			
3	National	6"	8.5	2.96	125								3			

SLOW PUMP

	67 spm	61 spm	71 spm
1			
2			
3			

DRILL STRING

DRILLING DATA					LOG DATA				RIG INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION	MD	TVD	LITHOLOGY		
8.5" - BIT		1.00	X-OVER	2.05	Twin Creek	6,108	5,681		Rig No	Unit 111
MUD MOTOR-2.25 H		24.00							Cell Nrren	918-645-6671
FLOAT SUB-X-OVER		2.63							Last BOP Test	9/13
UVHO -- SUB		2.60	14-5"HSW	427.23	GAS DATA				Next BOP Test	10/13
			JARS	32.68	BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS	Last Safety Meeting	9/28
					40 mjn.	38,395			Last BOP Drill	9/28
MONEL - SD37716		31.04	3-5"HSW	90.24	SHOWS				Last Operate Pipe Ram	9/24
MONEL - 228126		31.02	T-BHA. =	644.49	GAS UNITS	FROM	TO	ROP (FT/HR)	Last Operate Blind Ram	9/24
									Last Operate Annular	9/24
									LAST CASING	NEXT CASING
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG	13.375 @ 2001	7"
175	42	240	145	150	5,839	17	5,856	9 5/8 @ 6277.80		

GEOLOGIC

GENERAL INFO

SURVEYS

[illegible]

DAILY ACTIVITY

[illegible]

THIS AM Drilling @ 6670'

~~CONFIDENTIAL~~

DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine G&O Co of Utah, LLC

Operator: Wolverine Gas Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR			
09/27/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-30034	G. Urban			
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH	
22	WOC		6,297			#VALUE!	Arapian	7170 md	

MUD DATA

MUD DATA															
WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.2	33	NC	2/32	9.5	0.50	4.20	5	12	6/11	6297	9/27---0800	160,000	3480		264,000

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
5	12.250	REED	HP-53AKCP	537	PB4403	24	24	24	4746	5675	929	49.50	18.8	Y	30-105	40	7	5	-1/16
6	12.250	SEC	XS30S	537	10618960	24	24	24	5675	6297	622	26.50	23.5	Y	30-105	40	5	6	-1/8
													#VALUE!						
													#DIV/0!						

HYDRAULICS

HYDROLOGIC												HHP / IN ²	ECD			67 spm	61 spm	71 spm
PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.								
1	National	6"	8.5	2.96	125	335	134	237	1850	200			1					
2	National	6"	8.5	2.96									2					
3	National	6"	8.5	2.96	125	335							3					

SLOW PUMP

		67 spm	61 spm	71 spm
1				
2				
3				

DRILL STRING

BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.
12.25" - BIT		1.50	X-OVER	2.60
MUD MOTOR-2.25 H		31.10	3.625 HSW	180.16
FLOAT SUB-X-OVER		2.94	X-OVER	1.46
UVHO -- SUB		1.97	14-5"HSW	427.23
			JARS	32.68
MONEL - SD37716		30.89	3-5"HSW	90.24
MONEL - 228126		30.66	T-BHA. =	845.25
SHOCK SUB - 5800020		11.82		
STRING WT.	BHA WT.	PU WT.	SO WT.	ROT. TORQUE
176	55	250	140	150

GEOLOGIC

FORMATION	MD	TVD	LITHOLOGY
Arapiean			
GAS DATA			
BOTTOMS UP TIME	BG GAS	CONN GAS	TRIP GAS
80 ,in.			
SHOWS			
GAS UNITS	FROM	TO	ROP (FT/HR)
GRD. ELEVATION	GL TO KB	KB ELEVATION	INTERMEDIATE CSG
5,839	17	5,856	9 5/8 @ 6277.80

GENERAL INFO

RIG INFO	
Rig No	Unit 111
Cell Ncrren	918-645-667
Last BOP Test	9/13
Next BOP Test	10/13
Last Safety Meeting	9/27
Last BOP Drill	9/26
Last Operate Pipe Ram	9/24
Last Operate Blind Ra	9/24
Last Operate Annular	9/24
LAST CASING	NEXT CASING
13.375 @ 2001	7"

SURVEYS

[illegible]

DAILY ACTIVITY

FROM			LAST 24 HOURS:
0:00	1:00	1.00	Rig up Franks casing equipment
1:00	2:00	1.00	Lay down 8" monels and mud motor.
2:00	3:00	1.00	Pull wear bushing
3:00	3:30	0.50	HSM with Franks casing crew, rig up to run 9 5/8" casing
3:30	12:00	8.50	Ran 148 Jts. 47# P110 9 5/8" casing.
12:00	13:00	1.00	Install Halliburton circ. Head and wash down 8' casing set @ 6277.80'
13:00	13:30	0.50	Rig down Franks casing equipment.
13:30	15:30	2.00	HSM with Halliburton cementers, pressuer test lines to 2000 psi.
			Cement with 230sk 70bls 50/50 POZ 13lb/gal 1.71cuft/sk 7.91gal/sk
15:30	16:00	0.50	Pull landing jt. And set bushing packing.
16:00	0:00	8.00	WOC drain and flush mud tanks
			THIS AM TIH
Daily Total		24.00	

CONFIDENTIAL

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DAILY DRILLING REPORT

24 hrs - midnight to midnight

Operator: Wolverine G&O Co of Utah, LLC

Operator: Wolverine Gas Co of Utah, LLC									
DATE	WELL	CONTRACTOR	COUNTY, STATE	SPUD DATE	API#	SUPERVISOR			
09/26/05	Wolverine Federal 18-1	Unit Rig #111	Sevier, UT	9/6/05	43-041-30034	G. Urban			
DAYS F/ SPUD	PRESENT OPERATIONS @ MIDNIGHT		TOTAL DEPTH	PROGRESS	DRILLING TIME	ROP	FORMATION	AUTH. DEPTH	
21	Lay down 6 5/8" HW		6,297	166	11.50	14.4	Arapian	7170 md	

MUD DATA

WT	VIS.	WL	CK	PH	SAND	SOLIDS %	PV	YP	GELS	DEPTH	DATE/TIME	CHLORIDES	CALCIUM	MBT	SALT PPM
10.1	32	NC	2/32	9.5	0.50	4.00	4	11	6/10	6250	9/26---0800	158,000	3450		260,700

BIT DATA

BIT NO.	SIZE	MFG.	TYPE	IADC CODE	SERIAL NO.	JETS (1/32nd) or TFA			IN	OUT	FOOTAGE	HOURS	ROP	MTR	RPM RT+MTR	WOB	DULL CONDITION		
						T	B	G											
5	12.250	REED	HP-53AKCP	537	PB4403	24	24	24	4746	5675	929	49.50	18.8	Y	30-105	40	7	5	-1/16
6	12.250	SEC	XS30S	537	10618960	24	24	24	5675	6297	622	26.50	23.5	Y	30-105	40	5	6	-1/8
													#VALUE!						
													#DIV/0!						

HYDRAULICS

PUMP NO.	MANUFACTURER	LINER	STROKE LENGTH	GAL / STK	SPM	GPM	AV DP	AV DC	PUMP PRESS.	MTR DIFF PRESS.	HHP / IN ²	ECD		67 spm	61 spm	71 spm
1	National	6"	8.5	2.96	125	335	134	237	1850	200			1	300		
2	National	6"	8.5	2.96									2		300	
3	National	6"	8.5	2.96	125	335							3			310

SLOW PUMP

		67 spm	61 spm	71 spm
1	300			
2		300		
3				310

DRILL STRING

DRILL STRING					FORMATION				MD		TVD		LITHOLOGY		RIG INFO	
BOTTOMHOLE ASSEMBLY		LENGTH	O.D.	I.D.	FORMATION		MD		TVD		LITHOLOGY		RIG INFO			
12.25" - BIT		1.50	X-OVER	2.60	Arapiean								Rig No Unit 111			
MUD MOTOR-2.25 H		31.10	6.625 HSW	180.16									Cell Ncrrn 918-645-6671			
FLOAT SUB-X-OVER		2.94	X-OVER	1.46									Last BOP Test 9/13			
UVHO -- SUB		1.97	14-5"HSW	427.23	GAS DATA								Next BOP Test 10/13			
			JARS	32.68	BOTTOMS UP TIME		BG GAS		CONN GAS		TRIP GAS		Last Safety Meeting 9/26			
					80 ,in.								Last BOP Drill 9/26			
MONEL - SD37716		30.89	3-5"HSW	90.24	SHOWS								Last Operate Pipe Ra 9/24			
MONEL - 228126		30.66	T-BHA. =	845.25	GAS UNITS		FROM		TO		ROP (F/HR)		Last Operate Blind Ra 9/24			
SHOCK SUB - 5800020		11.82											Last Operate Annular 9/24			
STRING WT.		BHA WT.	PU WT.	SO WT.	ROT. TORQUE	GRD. ELEVATION	GL TO KB	KB ELEVATION		INTERMEDIATE CSG		LAST CASING		NEXT CASING		
176		55	250	140	150	5,839	17	5,856				13.375 @ 2001		9.625		

GEOLOGIC

GENERAL INFO

SURVEYS

MD	INCL	AZIMUTH	TVD	SECTION	N+ / S-	E+ / W-	DLS	TOOL
6,134	17.90	256.00	5707	1878	-648	-1878	1.93	MWD
6,242	16.10	256.00	5810	1909	-656	-1909	1.67	MWD

DAILY ACTIVITY

[illegible]

~~CONFIDENTIAL~~



WOLVERINE OPERATING COMPANY
of Utah, LLC

Energy Exploration in Partnership with the Environment

February 7, 2006

Ms. Carol Daniels
Utah Division of Oil Gas & Mining
1594 W.N. Temple, Suite 1210
Salt Lake City, UT 84114-5801

Re: Wolverine Federal #18-1

Dear Al:

Enclosed please find the following documents for the above referenced well:

- three copies of BLM completion form #3160-4
- directional survey
- geologic report
- mudlog
- Spectral Density, Dual Space Neutron, GR MD & TVD
- HRI MD & TVD
- EMI
- MRIL

Please let me know if you need additional information or have other concerns.

Sincerely,

Helene Bardolph

enclosures

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FEB 09 2006

DIV. OF OIL, GAS & MINING

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

FORM APPROVED
OMB NO. 1004-0137
Expires: March 31, 2007

1a. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other				5. Lease Serial No. UTU-73528					
b. Type of Completion: <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Resvr., Other _____				6. If Indian, Allottee or Tribe Name					
2. Name of Operator Wolverine Gas & Oil Co. of Utah, LLC				7. Unit or CA Agreement Name and No. Wolverine Fed. Exploration Unit					
3. Address 55 Campau NW, Grand Rapids, MI 49503				3a. Phone No. (include area code) 616-458-1150		8. Lease Name and Well No. Wolverine Federal 18-1			
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface 829' FSL & 1,928' FWL, Sec. 17, T23S, R1W At top prod. interval reported below 248' FSL & 52' FEL, Sec 18, T23S, R1W At total depth 188' FSL & 142' FEL, Sec 18, T23S, R1W				9. AFI Well No. 4304130034					
14. Date Spudded 09/06/2005				15. Date T.D. Reached 09/29/2005		10. Field and Pool, or Exploratory Exploratory			
16. Date Completed 01/08/2006 <input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod.				11. Sec., T., R., M., on Block and Survey or Area 18, T23S, R1W, SESW, SLB&M					
18. Total Depth: MD 7130' TVD 6685'				19. Plug Back T.D.: MD 7080' TVD 6635'		12. County or Parish Sevier			
20. Depth Bridge Plug Set: MD TVD				13. State UT					
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) HRI/GR, SDL/DSN/GR, MRII, EMI, ML, DML				17. Elevations (DF, RKB, RT, GL)* 5856' KB, 5839 GL					
22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit report) Directional Survey? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit copy)									
23. Casing and Liner Record (Report all strings set in well)									
Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
30.0"	20"	0.25 wall	Surface	120		785 Class G	160	Surf. (CIRC)	
17.5"	13-3/8"	61.0	Surface	2001		490 CBM	360		
"	"	"				380 Type V	80		
"	"	"			(Top Job)	175 Class G	36	Surf. (CIRC)	
12.25"	9-5/8"	47.0	Surface	6278		230 50/50 Poz	70	5200 (CAL)	
8.5"	7"/P-110	23.0	Surface	7129		190 50/50 Poz	42	5543 (CBL)	
24. Tubing Record									
Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	
2 7/8"	6623	NA							
25. Producing Intervals				26. Perforation Record					
Formation		Top	Bottom	Perforated Interval		Size	No. Holes	Perf. Status	
A) Navajo		6457	7130	6738-6820		0.45"	216	Open	
B)									
C)									
D)									
27. Acid, Fracture, Treatment, Cement Squeeze, etc.									
Depth Interval				Amount and Type of Material					
6738-6820				5500 gal 7-1/2% NeFeHCl w/inhibitor & surfactant					
28. Production - Interval A									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
01/08/2006	01/14/2006	72	→	1724	Tr	24			Pumped with ESP
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
		0	→	575	Tr	8	oil		Producing Oil Well
28a. Production - Interval B									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

*(See instructions and spaces for additional data on page 2)

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DIV. OF OIL, GAS & MINING

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
Navajo	6457'	7130'	Oil & Water	Arapien Twin Creek Navajo	Surface 6095' 6457'

32. Additional remarks (include plugging procedure):

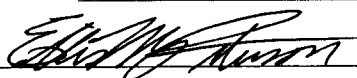
33. Indicate which items have been attached by placing a check in the appropriate boxes:

- ☒ Electrical/Mechanical Logs (1 full set req'd.)
 ☒ Geologic Report
 ☐ DST Report
 ☒ Directional Survey
☐ Sundry Notice for plugging and cement verification
☐ Core Analysis
☐ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) Ellis PetersonTitle Sr. Production Engineer

Signature


Date 01/18/2006

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



Weatherford

COPY

WOLVERINE GAS & OIL

FEDERAL #18-1

SEVIER, UTAH

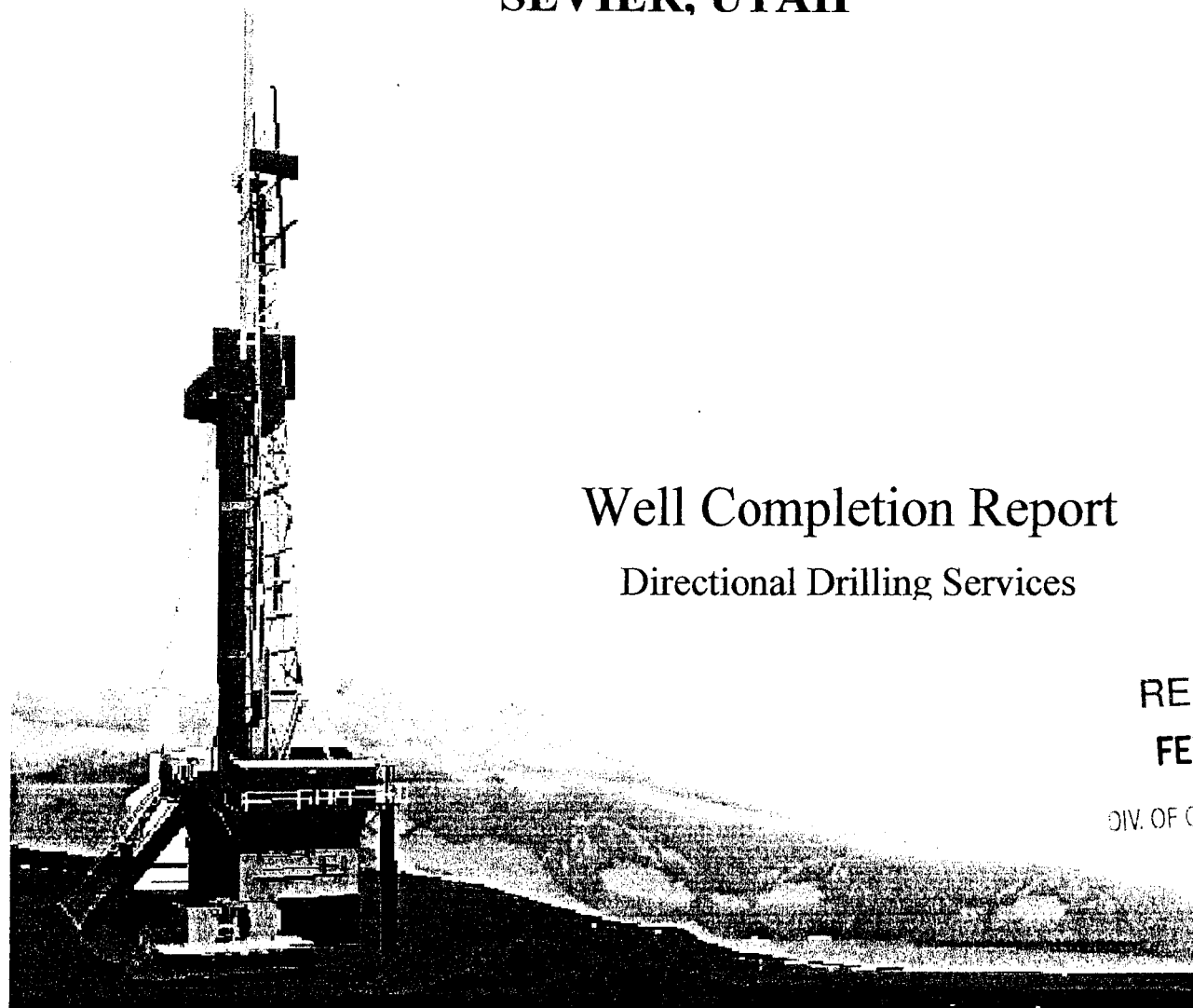
Well Completion Report

Directional Drilling Services

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DIV. OF OIL, GAS & MINING



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Weatherford®

DIRECTIONAL SERVICES

Weatherford Dailey
P.O. Box 1449
Mills, WY 82644
(307) 265-1413 Tele
(307) 235-3958 Fax

Mr. John Vrona
Wolverine Gas & Oil
One River Front Plaza
55 Campau N.W.
Grand Rapids, MI 49503-2616

Ref: Federal #18-1
Directional Services Final Report

Sir:

Thank you for the opportunity to provide directional drilling services on this project.

Attached for your review and well files is a final report including plots, MWD surveys, daily reports, BHA's and slide sheets.

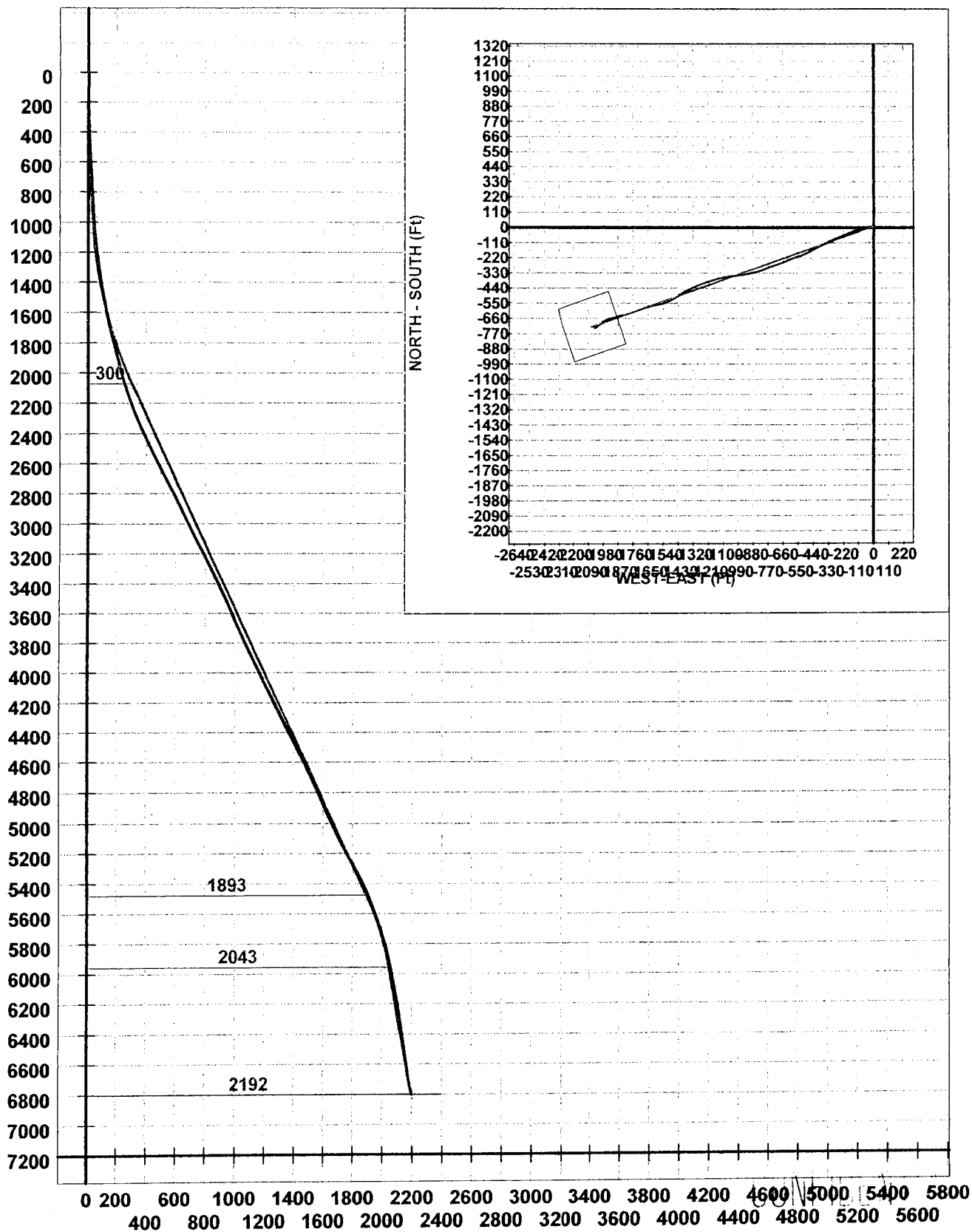
Sincerely,

Bruce Coates
Operations Manager – Casper
307.265.1413
bruce.coates@weatherford.com

Larren Holdren
Directional Coordinator – Casper
307.265.1413
larren.holdren@weatherford.com

CONFIDENTIAL

Company: WOLVERINE GAS & OIL CO. OF UTAH
 Lease/Well: WOLVERINE FEDERAL 18-1
 State/Country: SEVIER UTAH
 Declination: 12.52



° - WORK 18-1 -- 18-1

VERTICAL SECTION (Ft) @ 250.80°



Job Number: WYL0905D114

State/Country: SEVIER UTAH

Company: WOLVERINE GAS & OIL CO. OF UTAH Declination: 12.52

Lease/Well: WOLVERINE FEDERAL 18-1

Grid: UTAH CENTRAL ZONE

Location: COVENANT FIELD

File name: C:\DOCUME~1\KNAPPM\DESKTOP\WV18-1.SVY

Rig Name: UNIT 111

Date/Time: 10-Oct-05 / 16:18

RKB: 17.5

Curve Name: WORK 18-1

G.L. or M.S.L.: 5839

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 250.80
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	Dogleg Severity Deg/100	BUILD RATE Deg/100	WALK RATE Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
221.00	.70	225.20	220.99	1.22	-.95	-.96	.32	.32	-61.00
251.00	1.70	260.30	250.99	1.82	-1.16	-1.53	3.99	3.33	117.00
316.00	1.80	263.70	315.96	3.77	-1.43	-3.49	.22	.15	5.23
347.00	2.00	259.30	346.94	4.78	-1.58	-4.51	.80	.65	-14.19
378.00	2.50	260.30	377.92	5.98	-1.80	-5.71	1.62	1.61	3.23
408.00	2.70	262.90	407.89	7.32	-2.00	-7.05	.77	.67	8.67
438.00	2.80	266.50	437.85	8.71	-2.13	-8.48	.67	.33	12.00
469.00	3.00	271.60	468.81	10.20	-2.15	-10.05	1.05	.65	16.45
500.00	3.30	271.20	499.76	11.79	-2.11	-11.75	.97	.97	-1.29
530.00	3.30	260.90	529.72	13.45	-2.23	-13.47	1.97	.00	-34.33
561.00	3.70	271.90	560.66	15.26	-2.34	-15.35	2.52	1.29	35.48
591.00	3.50	276.30	590.60	16.99	-2.20	-17.23	1.14	-.67	14.67
622.00	3.60	263.10	621.54	18.80	-2.22	-19.13	2.65	.32	-42.58
652.00	3.50	267.70	651.48	20.60	-2.37	-20.98	1.01	-.33	15.33
683.00	3.70	279.30	682.42	22.38	-2.24	-22.92	2.43	.65	37.42
713.00	3.70	290.70	712.36	23.97	-1.74	-24.78	2.45	.00	38.00
746.00	3.80	268.90	745.29	25.83	-1.39	-26.87	4.30	.30	-66.06
776.00	3.90	283.20	775.22	27.64	-1.18	-28.85	3.21	.33	47.67
806.00	3.90	282.80	805.15	29.36	-.72	-30.84	.09	.00	-1.33
835.00	3.60	288.10	834.09	30.92	-.21	-32.67	1.58	-1.03	18.28
863.00	3.50	284.40	862.04	32.33	.27	-34.33	.89	-.36	-13.21
895.00	3.60	280.50	893.98	34.02	.70	-36.27	.82	.31	-12.19
926.00	3.80	280.90	924.91	35.75	1.07	-38.23	.65	.65	1.29
958.00	3.80	283.70	956.84	37.56	1.52	-40.30	.58	.00	8.75

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	Dogleg Severity Deg/100	BUILD RATE Deg/100	WALK RATE Deg/100
989.00	4.10	274.40	987.77	39.44	1.85	-42.41	2.28	.97	-30.00
1021.00	4.40	270.00	1019.68	41.65	1.94	-44.78	1.38	.94	-13.75
1052.00	5.20	269.10	1050.57	44.10	1.91	-47.37	2.59	2.58	-2.90
1147.00	6.70	261.90	1145.06	53.63	1.07	-57.16	1.76	1.58	-7.58
1241.00	7.90	252.80	1238.30	65.47	-1.62	-68.76	1.77	1.28	-9.68
1336.00	9.00	250.80	1332.27	79.42	-5.99	-82.02	1.20	1.16	-2.11
1430.00	9.80	256.80	1425.00	94.73	-10.24	-96.75	1.34	.85	6.38
1525.00	10.40	254.00	1518.53	111.34	-14.45	-112.86	.82	.63	-2.95
1619.00	11.80	252.20	1610.77	129.42	-19.72	-130.17	1.53	1.49	-1.91
1693.00	12.80	248.20	1683.07	145.17	-25.08	-144.99	1.77	1.35	-5.41
2040.00	16.80	247.80	2018.49	233.68	-58.32	-227.14	1.15	1.15	-.12
2134.00	18.60	250.00	2108.04	262.24	-68.58	-253.81	2.04	1.91	2.34
2228.00	19.60	246.60	2196.87	292.96	-79.97	-282.36	1.59	1.06	-3.62
2323.00	23.50	243.30	2285.21	327.64	-94.81	-313.92	4.30	4.11	-3.47
2417.00	24.40	243.30	2371.12	365.47	-111.96	-348.01	.96	.96	.00
2512.00	26.00	243.30	2457.07	405.57	-130.13	-384.15	1.68	1.68	.00
2606.00	26.60	242.60	2541.34	446.83	-149.07	-421.24	.72	.64	-.74
2701.00	27.10	242.40	2626.10	489.29	-168.89	-459.30	.53	.53	-.21
2795.00	27.70	244.50	2709.56	532.19	-188.21	-497.99	1.21	.64	2.23
2889.00	28.70	250.10	2792.41	576.48	-205.30	-538.94	3.01	1.06	5.96
2984.00	27.50	250.30	2876.22	621.22	-220.46	-581.04	1.27	-1.26	.21
3078.00	25.40	247.00	2960.38	663.05	-235.66	-620.04	2.73	-2.23	-3.51
3173.00	26.40	247.80	3045.83	704.47	-251.60	-658.35	1.12	1.05	.84
3267.00	27.50	251.70	3129.63	747.04	-266.31	-698.30	2.21	1.17	4.15
3362.00	28.80	249.90	3213.39	791.86	-281.06	-740.62	1.63	1.37	-1.89
3456.00	25.90	249.80	3296.88	835.03	-295.94	-781.16	3.09	-3.09	-.11
3550.00	25.50	249.30	3381.58	875.79	-310.18	-819.35	.48	-.43	-.53
3645.00	25.20	254.30	3467.44	916.42	-322.88	-857.96	2.27	-.32	5.26
3739.00	23.50	257.70	3553.08	955.00	-332.29	-895.54	2.34	-1.81	3.62
3834.00	24.10	259.40	3640.00	992.99	-339.89	-933.11	.96	.63	1.79
3928.00	25.30	262.30	3725.40	1031.65	-346.11	-971.88	1.81	1.28	3.09
4023.00	26.70	263.50	3810.79	1072.36	-351.25	-1013.21	1.57	1.47	1.26
4117.00	26.70	261.70	3894.76	1113.70	-356.69	-1055.09	.86	.00	-1.91
4212.00	25.70	260.10	3980.00	1154.99	-363.31	-1096.50	1.29	-1.05	-1.68
4306.00	26.60	258.00	4064.38	1195.98	-371.19	-1137.16	1.37	.96	-2.23
4401.00	27.00	250.30	4149.20	1238.66	-382.89	-1178.28	3.68	.42	-8.11
4495.00	25.50	253.80	4233.51	1280.21	-395.73	-1217.81	2.29	-1.60	3.72
4590.00	27.20	249.40	4318.65	1322.34	-409.07	-1257.77	2.72	1.79	-4.63
4684.00	26.30	247.00	4402.59	1364.60	-424.77	-1297.05	1.50	-.96	-2.55
4810.00	28.00	244.90	4514.70	1421.88	-448.22	-1349.54	1.55	1.35	-1.67
4905.00	26.90	240.60	4599.02	1465.22	-468.24	-1388.46	2.39	-1.16	-4.53
4999.00	26.50	236.60	4683.00	1506.48	-490.22	-1424.50	1.96	-.43	-4.26
5093.00	25.60	236.40	4767.45	1546.48	-513.00	-1458.92	.96	-.96	-.21
5188.00	26.60	243.80	4852.78	1587.48	-533.76	-1495.11	3.58	1.05	7.79
5283.00	24.50	251.50	4938.51	1628.30	-549.41	-1532.89	4.13	-2.21	8.11

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	Dogleg Severity Deg/100	BUILD RATE Deg/100	WALK RATE Deg/100
5377.00	25.70	260.10	5023.66	1667.92	-559.10	-1571.46	4.08	1.28	9.15
5471.00	26.60	260.00	5108.04	1708.81	-566.26	-1612.27	.96	.96	-.11
5566.00	29.50	254.30	5191.89	1753.17	-576.28	-1655.75	4.15	3.05	-6.00
5660.00	29.50	249.60	5273.71	1799.42	-590.62	-1699.73	2.46	.00	-5.00
5755.00	27.60	249.40	5357.16	1844.80	-606.51	-1742.25	2.00	-2.00	-.21
5849.00	24.40	251.20	5441.63	1886.00	-620.43	-1781.03	3.51	-3.40	1.91
5944.00	22.00	253.00	5528.95	1923.41	-631.96	-1816.62	2.63	-2.53	1.89
6039.00	19.70	255.00	5617.72	1957.16	-641.31	-1849.11	2.53	-2.42	2.11
6134.00	17.90	256.10	5707.65	1987.67	-648.96	-1878.75	1.93	-1.89	1.16
6242.00	16.10	255.90	5810.93	2019.12	-656.60	-1909.39	1.67	-1.67	-.19
6345.00	12.80	258.70	5910.65	2044.65	-662.32	-1934.44	3.27	-3.20	2.72
6440.00	11.40	244.70	6003.56	2064.42	-668.39	-1953.25	3.41	-1.47	-14.74
6534.00	10.60	238.00	6095.84	2082.08	-676.94	-1968.98	1.60	-.85	-7.13
6628.00	9.50	233.90	6188.40	2097.94	-686.10	-1982.58	1.40	-1.17	-4.36
6723.00	9.10	234.40	6282.15	2112.65	-695.09	-1995.03	.43	-.42	.53
6817.00	8.30	233.90	6375.06	2126.27	-703.41	-2006.55	.85	-.85	-.53
6912.00	8.60	234.50	6469.03	2139.65	-711.58	-2017.87	.33	.32	.63
7069.00	8.60	234.50	6624.27	2162.18	-725.21	-2036.99	.00	.00	.00
7090.00	8.50	233.60	6645.03	2165.17	-727.04	-2039.52	.80	-.48	-4.29
projected @ bit									
7130.00	8.50	233.60	6684.60	2170.82	-730.55	-2044.27	.00	.00	.00

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COPY

WOLVERINE GAS & OIL CORPORATION

**WOLVERINE FEDERAL #18-1
NW/NW SEC.18.T23S, R1W
SEVIER CO., UT**

GEOLOGIC REPORT

ON

RECEIVED

FEB 09 2006

DIV. OF OIL, GAS & MINING

**WOLVERINE FEDERAL #18-1
NW/NW SEC.18.T23S, R1W
SEVIER CO., UT**

FOR

**WOLVERINE GAS & OIL CORPORATION
ONE RIVER FRONT PLAZA
55 CAMPAU NW
GRAND RAPIDS, MI 49503-2616**

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September 2005

**Decollement Consulting, Inc
Roger D. Charbonneau, B.Sc.
Geologist**

1

WELL DATA SUMMARY

WELL NAME	WOLVERINE FEDERAL #18-1
OPERATOR	WOLVERINE GAS & OIL CORP

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BOTTOM HOLE LOCATION	NW/NW SEC.20.T23S, R1W SEVIER COUNTY, UT
API #	043 - 041- 30033
WELL CLASSIFICATION	DEVELOPMENT COVENANT FIELD
DRILLING CONTRACTOR	UNIT #111
ELEVATION - GROUND LEVEL KELLY BUSHING	5839' 5856'
SPUD DATE	9-06-05
SURFACE CASING	2006.07' OF 13 3/8"
INTERMEDIATE CASING	6297' OF 9 5/8"
PRODUCTION CASING	7130' OF 7"
HOLE SIZE	17 1/2", 12 1/4", 8 1/2"
SAMPLE INTERVAL	2030 - 7130
GAS DETECTION	2000 -7130
OPEN HOLE LOGS	GR, SP, CAL, HRI, CNL-FDL, Dip Meter, EMRL
MUD TYPE	SATURATED SALT, FLOZAN
WELL STATUS	AWAITING COMPLETION

2

FORMATION TOPS

Kelly Bushing 5856'

Formation Prog. (tvd) Spl.Top (md) Spl. Top (tvd) Log Top (md) Log Top (tvd) Sub Sea

Arapien Surface

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Twin Creek	5588	6108	5681	6095	5673	183
Navajo	5956	6470	6034	6458	6021	-165

FORMATION EVALUATION

WOLVERINE GAS & OIL CORPORATION WOLVERINE FEDERAL #18-1 NW/NW SEC.18.T23S, R1W SEVIER COUNTY, UT

The Wolverine Federal #18-1 was the last well drilled on the “B” pad in the Covenant field. Decollement Consulting began sample coverage at 2030’ on Unit Rig #111, September 6, 2005. Crews collected 30’ lagged samples total depth (7130’). Surface casing was set at 2006’ (13 3/8”) and 12 ¼’ hole drilled to

6297'. Intermediate casing (9 5/8") was set at 6277' and production casing (7") ran total depth (7130'). A full suite of E-logs was run including Dip Meter and EMRL. Gas detection was ran from 2000' to 7130'.

Navajo Sandstone 6458 MD Log, 6021 TVD Log -165 SS

The Navajo Sandstone was white, clear, light brown, quartzose, pink red orange, very fine (lower) to coarse (lower) grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 50-98% unconsolidated, brown oil stain, hydrocarbon odor, rainbows and oil flecks on wash water, yellow white oil fluorescence, yellow white milky cut fluorescence, yellow gold residual ring cut, 10-14% intergranular porosity.

Conclusion: Oil saturated reservoir - awaiting completion.

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BIT RECORD

WELL NAME	WOLVERINE FEDERAL #18-1
LOCATION	NW/NW SEC. 18, T23S, R1W
SURFACE CASING	2000' OF 13 3/8
SPUD DATE	9-06-05
TD DATE	9-29-05

BIT	1	2	3	4 RR
SIZE	17 1/2	17 1/2	17 1/2	12 1/4
MAKE	HTC	HTC	HTC	STC
TYPE	M655H	MX09HDX	MX09HDX	F-2
SERIAL #	596JM	6012085	6012085	YDS128
JETS	4x28	4x28	4x28	3x24

OUT @	1772	1776	2001	3271
FOOTAGE	1671	4	225	1270
HOURS	68	1	23 ½	50
WT	40	30	40	40
RPM	0/30	0/30	0/30	0/30
PP	1750	1750	1450	1350
MUD WT	9.1	9.1	9.4	9.4
VIS	36	36	34	27

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BIT RECORD CONTINUED

BIT	5	6	7	8
SIZE	12 ¼	12 ¼	12 ¼	8 1/2
MAKE	RTC	RTC	SEC	RTC
TYPE	PB4764	PB4403	10618960	MT8449
SERIAL #	PB4427	PB4407	12682195	731186
JETS	3x24	3x24	3x24	3x21
OUT @	4746	5675	6297	7130
FOOTAGE	1475	928	622	833
HOURS	93 ½	52	25	39
WT	40	38	35	35
RPM	0/30	0/30	0/30	0/25
PP	1700	1850	1995	1080
MUD WT	9.4	9.5	9.9	8.6
VIS	32	33	32	35

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DAILY DRILLING SUMMARY

DATE	DEPTH	PROG.	HRS	MUD	VIS	WL	PH	ACTIVITY
9-6-05	277	176	97	8.9	33	NC	10.5	SPUD DRILL
9-7-05	890	726	22	8.7	29	NC	10.5	DRILL
9-8-05	1396	670	23 ½	9.5	29	NC	9.5	DRILL
9-9-05	1772	376	22 ½	9.3	30	NC	9.0	DRILL LOST CIRR.
9-10-05	1840	68	5 ½	9.1	36	NC	9.5	BIT TRIP, DRILL
9-11-05	2001	161	18	9.4	34	NC	10.0	DRILL,TRIP-RUN 13 3/8"
9-12-05	2001	NIL	NIL					CEMENT, PRESS TEST
9-13-05	2001	NIL	NIL					NIPPLE UP
9-14-05	2676	675	23 ½	9.2	26	NC	9.5	DRILL
9-15-05	3059	383	20	9.2	26	NC	9.5	DRILL,WORK ON PUMPS
9-16-05	3271	212	10	9.4	27	NC	10.0	DRILL, TRIP MWD
9-17-05	3539	268	16	9.3	31	NC	10.5	RIH, DRILL
9-18-05	3974	435	23 ½	9.6	32	NC	10.5	DRILL
9-19-05	4310	336	23 ½	9.7	32	NC	10.0	DRILL
9-20-05	4643	333	23	9.5	32	NC	9.5	DRILL

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9-21-05	4842	199	14 ½	9.5	32	NC	10.0	DRILL,BIT TRIP
9-22-05	4951	109	8	9.6	34	NC	10.5	RIH, DRILL
9-23-05	5328	367	23	9.5	35	NC	10.0	DRILL
9-24-05	5675	347	13	9.5	33	NC	10.5	DRILL, TRIP MWD
9-25-05	5943	168	9	9.7	34	NC	10.5	RIG REPAIR, RIH, DRILL
9-26-05	6297	354	17	9.9	32	NC	10.0	DRILL, POOH, RUN 9 5/8
9-27-05	6297	NIL	NIL					CEMENT TEST
9-28-05	6427	230	8	8.2	35	NC	8.5	BUILD VOL, RIH, DRILL
9-29-05	6912	495	23 ½	8.4	35	NC	8.0	DRILL
9-30-05	7130	218	6	8.6	35	NC	8.5	DRILL, POOH, LOG

DEVIATION SURVEYS

DEPTH	INCLINATION	DIRECTION
2040.00	16.80	247.80
2134.00	18.60	250.00
2228.00	19.60	246.60
2323.00	23.50	243.30
2417.00	24.40	243.30
2512.00	26.00	243.30
2606.00	26.60	242.60
2701.00	27.10	242.40
2795.00	27.70	244.50
2889.00	28.70	250.10
2984.00	27.50	250.30

3078.00	25.40	247.00
3267.00	27.50	251.70
3362.00	28.80	249.90
3456.00	25.90	249.80
3550.00	25.50	249.30
3645.00	25.20	254.30
3645.00	25.20	254.30
3739.00	23.50	257.70
3834.00	24.10	259.40
3928.00	25.30	262.30
4023.00	26.70	263.72
4023.00	26.70	263.50
4117.00	26.70	261.70
4212.00	25.70	26.10
4306.00	26.60	258.00
4401.00	27.00	250.30
4495.00	25.50	253.80
4590.00	27.20	249.40 4684.00
4684.00	26.30	247.00
4810.00	28.0	244.90
4905.00	26.9	240.6
4495.00	25.50	253.80
4590.00	27.20	249.40
4684.00	26.30	247.00
4810.00	28.00	244.90
4905.00	26.90	240.60
4999.00	26.50	236.60
5093.00	25.60	236.40

CONF

5188.00	26.60	243.80
5283.00	24.50	251.50
5377.00	25.70	260.10
5471.00	26.60	260.00
5566.00	29.50	254.30
5660.00	29.50	249.60
5755.00	27.60	249.40
5849.00	24.40	251.20
5944.00	22.00	253.00
6039.00	19.70	255.00
6134.00	17.90	256.10
6242.00	16.10	255.90
6345.00	12.80	258.70
6440.00	11.40	244.70
6534.00	10.60	238.00
6628.00	9.50	233.90
6723.00	9.10	234.40
6817.00	8.30	233.90
6912.00	8.60	234.50
7069.00	8.60	234.50
7090.00	8.50	233.60

SAMPLE DESCRIPTIONS

**Wolverine Gas & Oil Corporation
Wolverine Federal #18-1**

- 2030-60 LIMESTONE 100% Light to medium gray, silty, sandy, argillaceous, lithographic, mudstone.**
- 2060-90 LIMESTONE 20% Light to medium gray, silty, sandy, argillaceous, lithographic, mudstone.
Anhydrite 80% White, chalky, crystalline, silty, firm.**
- 2090-2120 LIMESTONE 70% Light to medium gray, silty, sandy, argillaceous, lithographic, mudstone.
Anhydrite 30% White, chalky, crystalline, silty, firm.**
- 2120-50 LIMESTONE 90% Light to medium gray, silty, sandy, argillaceous, lithographic, mudstone.
Anhydrite 10% White, chalky, crystalline, silty, firm.**
- 2150-80 SHALE 10% Red brown, silty, sandy, dolomitic, blocky, firm, salt casts.
SILTSTONE 10% White, red brown, argillaceous, dolomitic.
SANDSTONE 50% White, red brown, clear, quartzose, fine to medium grained, sub-angular to rounded, fair to poor sorted.
LIMESTONE 30% Light to medium gray, argillaceous, lithographic, mudstone.**
- 2180-2210 SHALE 30% Red brown, silty, sandy, dolomitic, blocky, firm, salt casts.
SILTSTONE 10% White, red brown, argillaceous, dolomitic.**

WOLVERINE

SANDSTONE 50% White, red brown, clear, quartzose, fine to medium grained, sub-angular to rounded, fine to poor sorted.

LIMESTONE 10% Light to medium gray, argillaceous, lithographic, mudstone.

2210-40 SHALE 20% Red brown, silty, sandy, dolomitic, blocky, firm, salt casts.
SILTSTONE 10% White, red brown, argillaceous, dolomitic
LIMESTONE 70% Light to medium gray, argillaceous, lithographic, mudstone.

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2240-70 LIMESTONE 100% Light to medium gray, argillaceous, lithographic, mudstone.

2270-2300 LIMESTONE 60% Light to medium gray, argillaceous, lithographic, mudstone.
SHALE 40% Red brown, silty, blocky, dolomitic.

2300-30 SHALE 30% Red brown, silty, blocky, dolomitic, abundant salt casts.
SILTSTONE 10% Red brown, white, arenaceous, argillaceous, blocky, firm.
LIMESTONE 10% Light to medium gray, argillaceous, lithographic, mudstone.
ANHYDRITE 20% White, silty, chalky, crystalline.
SANDSTONE 30% White, pink, fine to medium grained, sub angular to rounded, fine to medium grained, fair to poor sorted, unconsolidated.

2330-60 SHALE 20% Red brown, silty, blocky, dolomitic, abundant salt casts.
SILTSTONE 10% Red brown, white, arenaceous, argillaceous, blocky, firm.
LIMESTONE 10% Light to medium gray argillaceous, lithographic, mudstone.
SANDSTONE 60% White, pink, fine to medium grained, sub angular to rounded, fine to medium grained, poor sorted, unconsolidated.

2360-90 SHALE 10% Red brown, silty, blocky, dolomitic, abundant salt casts.
LIMESTONE 10% Light to medium gray arenaceous, argillaceous, blocky, firm.
SANDSTONE 80% White, pink, fine to medium grained, sub angular to rounded, fine to medium grained, poor sorted, unconsolidated.

2390-2420 SHALE 30% Red brown, blocky, dolomitic, firm to hard, silty.
SILTSTONE 10% Red brown, gray, arenaceous, argillaceous, dolomitic.
SANDSTONE 40% White, pink, quartzose, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
LIMESTONE 20% Light gray, argillaceous, lithographic, mudstone.

2420-50 SHALE 10% Red brown, blocky, dolomitic, firm to hard, silty.
SANDSTONE 90% White, pink, quartzose, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.

- 2450-80** SHALE 50% Red brown, blocky, dolomitic, firm to hard, silty.
SILTSTONE 20% Red brown, gray, arenaceous, argillaceous, dolomitic.
SANDSTONE 30% White, pink, quartzose, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
- 2480-2510** SHALE 70% Red brown, silty, dolomitic, firm, blocky.
SILTSTONE 20% Red brown, green, dolomitic, argillaceous.
SANDSTONE 10% White, clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
- 2510-40** SHALE 50% Red brown, silty, dolomitic, firm, blocky.
SILTSTONE 40% Red brown, green, dolomitic, argillaceous.
SANDSTONE 10% White, clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
- 2540-70** SHALE 70% Red brown, silty, dolomitic, firm, blocky, light gray, smooth, chalky, limy in part.
SILTSTONE 30% Red brown, green, dolomitic, argillaceous.
- 2470-2600** SHALE 80% Red to brown, gray, gray green, variable color, blocky, smooth, waxy, silty.
SILTSTONE 20% red brown, dolomitic, anhydritic, arenaceous, blocky, firm.
- 2600-30** SHALE 60% Red to brown, gray, gray green, variable color, blocky, smooth, waxy, silty.
SILTSTONE 10% Red brown, dolomitic, anhydritic, arenaceous, blocky, firm.
SANDSTONE 30% White, clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
- 2630-60** SHALE 50% Red to brown, gray, gray green, variable color, blocky, smooth, waxy, silty.
SILTSTONE 10% Red brown, dolomitic, anhydritic, arenaceous, blocky, firm.
SANDSTONE 40% White, clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
- 2660-90** SHALE 70% Red to brown, gray, gray green, variable color, blocky, smooth, waxy, silty.
SILTSTONE 20% Red brown, dolomitic, anhydritic, arenaceous, blocky, firm.
SANDSTONE 10% White, clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.

- 2690-2720** SHALE 20% Red to brown, gray, gray green, variable color, blocky, smooth, waxy, silty.
SANDSTONE 80% White, clear, pink, fine to medium grained, sub angular to rounded,
fair to poor sorted, unconsolidated.
- 2720-50** SHALE 20% Red brown, green, white, variable color, blocky, silty, dolomitic, smooth,
waxy.
SANDSTONE 80 % White, clear, pink, fine to medium grained, sub angular to rounded,
fair to poor sorted, unconsolidated.
- 2750-80** SHALE 60% Red brown, green, white, variable color, blocky, silty, dolomitic, smooth,
waxy.
SANDSTONE 10 % White, clear, pink, fine to medium grained, sub angular to rounded,
fair to poor sorted, unconsolidated.
SILTSTONE 30% Red brown, arenaceous, argillaceous, dolomitic, anhydritic, salt casts.
- 2780-2810** SHALE 60% Red brown, green, white, variable color, blocky, silty, dolomitic, smooth,
waxy.
SANDSTONE 40 % White, clear, pink, fine to medium grained, sub angular to rounded,
fair to poor sorted, unconsolidated.
- 2810-40** SHALE 20% Red brown, green, white, variable color, blocky, silty, dolomitic, smooth,
waxy.
SANDSTONE 80 % White, clear, pink, fine to medium grained, sub angular to rounded,
fair to poor sorted, unconsolidated.
- 2840-70** SHALE 30% Red brown, green, white, variable color, blocky, silty, dolomitic, smooth,
waxy.
SANDSTONE 70 % White, clear, pink, fine to medium grained, sub angular to rounded,
fine to poor sorted, unconsolidated.
- 2870-2900** SHALE 10% Red brown, green, white, variable color, blocky, silty, dolomitic, smooth,
waxy.
SANDSTONE 90 % White, clear, pink, fine to medium grained, sub angular to rounded,
fine to poor sorted, unconsolidated.

- 2900-30** SHALE 10% Red brown, green, white, variable color, blocky, silty, dolomitic, smooth,
waxy.

SANDSTONE 90 % White, clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.

- 2930-60** **SHALE 10% Red brown, green, white, variable color, blocky, silty, dolomitic, smooth, waxy.**
SANDSTONE 90 % White, clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
- 2960-90** **SHALE 20% Red brown, green, white, variable color, blocky, silty, dolomitic, smooth, waxy.**
SANDSTONE 80 % White, clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
- 2990-3020** **SHALE 20% Red brown, silty, blocky, dolomitic.**
SANDSTONE 50% White, clear, pink, quartzose, fine to medium grained, sub angular to rounded, fair to poor sort, unconsolidated.
LIMESTONE 30% Light to medium gray, argillaceous, lithographic, mudstone.
- 3020-50** **SHALE 40% Red brown, white, gray to green, silty, waxy, smooth.**
SANDSTONE 20% White, clear, pink, quartzose, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
LIMESTONE 40% Light to medium gray, argillaceous, lithographic, mudstone.
- 3050-80** **SHALE 30% Red brown, white, gray to green, silty, waxy, smooth.**
SANDSTONE 10% White, clear, pink, quartzose, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
LIMESTONE 50% Light to medium gray, argillaceous, lithographic, mudstone.
SILTSTONE 20% Red brown, white, mottled with anhydrite, anhydritic, arenaceous, blocky, dolomitic.

- 3080-3110** **SHALE 30% Red brown, white, gray to green, silty, waxy, smooth.**
SANDSTONE 10% White, clear, pink, quartzose, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
LIMESTONE 30% Light to medium gray, argillaceous, lithographic, mudstone.
SILTSTONE 20% Red brown, white, mottled with anhydrite, anhydritic, arenaceous, blocky, dolomitic.

ANHYDRITE 10% white, soft, chalky, firm.

- 3110-40** SHALE 40% Red brown, white, gray green, silty, waxy, smooth.
LIMESTONE 40% Light to medium gray, argillaceous, lithographic, mudstone.
SILTSTONE 10% Red brown, white, mottled with anhydrite, anhydritic, arenaceous, blocky, dolomitic.
ANHYDRITE 10% White, soft, chalky, firm.
- 3140-70** SHALE 20% Red brown, white, gray green, silty, waxy, smooth.
LIMESTONE 60% Light to medium gray, argillaceous, lithographic, mudstone.
SILTSTONE 10% Red brown, white, mottled with anhydrite, anhydritic, arenaceous, blocky, dolomitic.
ANHYDRITE 10% White, soft, chalky, firm.
- 3170-3200** SHALE 20% Red brown, silty, blocky, firm.
SILTSTONE 10% Red brown, green, anhydritic, dolomitic, blocky.
LIMESTONE 60% Light to medium gray, argillaceous, lithographic, mudstone.
ANHYDRITE 10% White, silty, chalky, crystalline.
- 3200-30** SHALE 20% Red brown, silty, blocky, firm.
SILTSTONE 10% Red brown, green, anhydritic, dolomitic, blocky.
SANDSTONE 30% White, clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
LIMESTONE 30% Light to medium gray, argillaceous, lithographic, mudstone.
ANHYDRITE 10% White, crystalline, sucrosic.

- 3230-60** SHALE 40% Red brown, silty, blocky, dolomitic, firm, white, smooth, waxy.
SILTSTONE 10% Red brown, arenaceous, mottled, anhydritic, dolomitic, firm.
SANDSTONE 20% White, clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
LIMESTONE 20% Light to medium gray, argillaceous, lithographic, mudstone.
ANHYDRITE 10% White, crystalline, sucrosic.
- 3260-90** SHALE 30% Red brown, silty, blocky, dolomitic, firm, white, smooth, waxy.
SILTSTONE 20% Red brown, arenaceous, mottled, anhydritic, dolomitic, firm.
SANDSTONE 20% White, clear, pink, fine to medium grained, sub angular to rounded,

fair to poor sorted, unconsolidated.

LIMESTONE 10% Light to medium gray, argillaceous, lithographic, mudstone.

ANHYDRITE 20% White, crystalline, sucrosic.

3290-3320 SHALE 40% Red brown, silty, blocky, dolomitic, firm, white, smooth, waxy.
SILTSTONE 20% Red brown, arenaceous, mottled, anhydritic, dolomitic, firm.
LIMESTONE 20% Light to medium gray, argillaceous, lithographic, mudstone.
ANHYDRITE 20% White, crystalline, sucrosic.

3320-50 SHALE 30% Red brown, silty, dolomitic, blocky.
LIMESTONE 70% Light to medium gray, argillaceous, lithographic, mudstone.

3350-80 SHALE 20% Red brown, silty, dolomitic, blocky.
SANDSTONE 50% White clear, pink, fine to medium grained, sub angular to rounded, fair to poor sort, unconsolidated.
LIMESTONE 30% Light to medium gray, argillaceous, lithographic, mudstone.

3380-3410 SHALE 10% Red brown, silty, dolomitic, blocky.
SANDSTONE 40% White clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
LIMESTONE 30% Light to medium gray, argillaceous, lithographic, mudstone.
ANHYDRITE 20% White, silty, chalky, firm.

3410-40 SHALE 20 % Red brown, silty, blocky, dolomitic.
SANDSTONE 20% White, very fine to fine grained, sub angular to rounded, fair to poor sorted, clay matrix, anhydrite cement, tight, no show.
LIMESTONE 60% Light to medium gray, argillaceous, lithographic, mudstone.

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3440-70 SHALE 10 % Red brown, silty, blocky, dolomitic.
SANDSTONE 10% White, very fine to fine grained, sub angular to rounded, fair to poor sorted, clay matrix, anhydrite cement, tight, no show.
LIMESTONE 80% Light to medium gray, argillaceous, lithographic, mudstone.

3470-3500 SHALE 60% Red brown, silty, sandy, abundant floating quartz grains, dolomitic, soft.
LIMESTONE 30% Light to medium gray, argillaceous, lithographic, mudstone.
SANDSTONE 10% White, very fine to fine grained, sub angular to rounded, fair to poor sorted, clay matrix, anhydrite cement, tight, no show.

3500-30 SHALE 20% Red brown, silty, dolomitic, blocky.
SILTSTONE 50% Red brown, arenaceous, argillaceous, blocky, dolomitic.
SANDSTONE 20% White, red brown, very fine to fine grained, sub angular, fair to poor sorted, clay matrix, calcareous cement, tight.

ANHYDRITE 10% White, silty.

- 3530-60** SHALE 60% Red brown, gray green, gray, blocky, silty, dolomitic.
SILTSTONE 10% White, arenaceous, argillaceous, anhydritic, blocky.
SANDSTONE 20% White, clear, pink, fine to medium grained, sub angular, fair to poor sorted, unconsolidated.
ANHYDRITE 10% White, chalky, silty, soft to firm.
- 3560-90** SHALE 70% Red brown, gray green, gray, blocky, silty, dolomitic, abundant floating rounded quartz grains.
LIMESTONE 30% Light to medium gray, argillaceous, lithographic, mudstone.
- 3590-3620** SHALE 60% Red brown, gray green, gray, blocky, silty, dolomitic, abundant floating rounded quartz grains, mottled with anhydrite.
LIMESTONE 40% Light to medium gray, argillaceous, lithographic, mudstone.
- 3620-50** SHALE 80% Red brown, gray green, gray, blocky, silty, dolomitic, abundant floating rounded quartz grains, mottled with anhydrite.
LIMESTONE 20% Light to medium gray, argillaceous, lithographic, mudstone.
- 3650-80** SHALE 20% Red brown, mottled, silty, sandy, blocky, firm, dolomitic.
LIMESTONE 70% Light to medium gray, argillaceous, lithographic, mudstone.
ANHYDRIC 10% White, soft, chalky, crystalline, translucent.
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- 3680-3710** SHALE \10% Red brown, mottled, silty, sandy, blocky, firm, dolomitic.
LIMESTONE 90% Light to medium gray, argillaceous, lithographic, mudstone.
- 3710-40** LIMESTONE 90% Light to medium gray, argillaceous, lithographic, mudstone.
ANHYDRIC 10% White, soft, chalky, crystalline, translucent.
- 3740-70** LIMESTONE 100% Light to medium gray, argillaceous, lithographic, mudstone.
- 3770-3800** SHALE 10% Red brown, mottled, silty, sandy, blocky, firm, dolomitic.
LIMESTONE 80% Light to medium gray, argillaceous, lithographic, mudstone.
ANHYDRIC 10% White, soft, chalky, crystalline, translucent.
- 3800-30** SHALE 10% Red brown, blocky, dolomitic, firm to hard.
LIMESTONE 90% Light to medium gray brown, crystalline, dense, argillaceous, lithographic, mudstone, 15% soft chalky.
- 3830-60** SHALE 50% Various color, red brown, gray green, white, soft to firm, dolomitic, blocky, silty.

SILTSTONE 20% White, arenaceous, argillaceous, anhydritic, soft to firm.
LIMESTONE 10% Light to medium gray brown, crystalline, dense, argillaceous, lithographic, mudstone, 15% soft chalky.
ANHYDRITE 20% White, soft, chalky, floating quartz grains.

3860-90 **SHALE 20%** Various color, red brown, gray green, white, soft to firm, dolomitic, blocky, silty, abundant salt casts.
SILTSTONE 10% White, arenaceous, argillaceous, anhydritic, soft to firm.
LIMESTONE 20% Light to medium gray brown, crystalline, dense, argillaceous, lithographic, mudstone, 15% soft chalky.
ANHYDRITE 50% White, soft, chalky, silty, sandy, crystalline, sucrosic texture in part.

3890-3920 **SHALE 10%** Various color, red brown, gray green, white, soft to firm, dolomitic, blocky, silty, abundant salt casts.
SILTSTONE 10% White, arenaceous, argillaceous, anhydritic, soft to firm.
LIMESTONE 70% Light to medium gray, crystalline, dense, argillaceous, lithographic, mudstone, abundant soft chalky.
ANHYDRITE 10% White, soft, chalky.

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3920-50 **LIMESTONE 100%** Light to medium gray, crystalline, dense, argillaceous, lithographic, mudstone, 10% soft chalky, abundant anhydrite fracture in fill.

3950-80 **LIMESTONE 100%** Light to medium gray, crystalline, dense, argillaceous, lithographic, mudstone, 35% soft chalky, silty, sandy, anhydritic.

3980-4010 **LIMESTONE 100%** Light to medium gray, crystalline, dense, argillaceous, lithographic, mudstone, 40% soft chalky.

4010-40 **LIMESTONE 70%** Light to medium gray, crystalline, dense, argillaceous, lithographic, mudstone, 10% soft chalky, abundant anhydrite fracture in fill.
ANHYDRITE 30% White, chalky, sandy, silty, soft.

4040-70 **LIMESTONE 70%** Light to medium gray, crystalline, dense in part, argillaceous, soft, chalky in part, argillaceous, lithographic, mudstone.
ANHYDRITE 30% White, soft, chalky.

4070-4100 **LIMESTONE 100%** Light to medium gray, argillaceous, lithographic, mudstone, 40% soft, chalky, abundant anhydrite fracture in fill.

4100-30 **LIMESTONE 100%** Light to medium gray, argillaceous, lithographic, mudstone, white,

soft, chalky. (60%)

- 4130-60 LESTONE 100% Light to medium gray, argillaceous, lithographic, mudstone, white, 30% soft, chalky.**
- 4160-90 LESTONE 100% Light to medium gray, argillaceous, lithographic, mudstone, white, 20% soft, chalky.**
- 4190-4220 LESTONE 100% Light to medium gray, argillaceous, lithographic, 20% white, soft, chalky mudstone.**
- 4220-50 LESTONE 100% Light to medium gray, argillaceous, lithographic, mudstone, white, 20% soft, chalky abundant crystalline anhydrite.**

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- 4250-80 LESTONE 100% Light to medium gray, crystalline, argillaceous, lithographic, mudstone, dense in part, earthy in part, 20% white, soft, chalky, mudstone, abundant anhydrite fracture fill.**
- 4280-4310 LESTONE 100% Light to medium gray, crystalline, argillaceous, lithographic, mudstone, dense in part, earthy in part, 20% white, soft, chalky, mudstone, abundant anhydrite fracture fill.**
- 4310-40 LESTONE 100% Light to medium gray, crystalline, argillaceous, lithographic, mudstone, dense in part, earthy in part, 20% white, soft, chalky, mudstone, abundant anhydrite fracture fill.**
- 4340-70 LESTONE 100% Light to medium gray, crystalline, argillaceous, lithographic, mudstone, dense in part, earthy in part, 20% white, soft, chalky, mudstone, abundant anhydrite fracture fill.**
- 4370-4400 LESTONE 100% Light to medium gray, crystalline, argillaceous, lithographic, mudstone, dense in part, earthy in part, 20% white, soft, chalky, mudstone, abundant anhydrite fracture fill.**
- 4400-30 LESTONE 100% Light to medium gray, argillaceous, lithographic, mudstone, white, soft, chalky.**
- 4430-60 LESTONE 100% Light to medium gray, argillaceous, lithographic, mudstone, white, soft, chalky.**

- 4460-90** Limestone 100% Light to medium gray, argillaceous, lithographic, mudstone, white, soft, chalky.
- 4490-4520** SHALE 20% Red brown, silty, blocky, dolomitic, firm.
 SILTSTONE 20% Red brown, white, arenaceous, argillaceous, anhydritic, blocky, firm, dolomitic.
 LIMESTONE 50% Light to medium gray, dense, crystalline in part, lithographic, mudstone.
 ANHYDRITE 10% White, silty, sandy, chalky.

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- 4520-50** SHALE 20% Red brown, silty, blocky, dolomitic, firm.
 SILTSTONE 10% Red brown, white, arenaceous, argillaceous, anhydritic, blocky, firm, dolomitic.
 LIMESTONE 30% Light to medium gray, dense, crystalline in part, lithographic, mudstone.
 ANHYDRITE 40% White, silty, sandy, chalky.
- 4550-80** SHALE 20% Red brown, blocky, dolomitic, firm.
 SILTSTONE 20% Red brown, arenaceous, dolomitic, blocky, white, silty, sandy, anhydritic.
 ANHYDRITE 60% White, soft, chalky, sandy, silty.
- 4580-4610** SHALE 10% Red brown, blocky, dolomitic, firm.
 SILTSTONE 30% Red brown, arenaceous, dolomitic, blocky, white, silty, sandy, anhydritic.
 ANHYDRITE 60% White, soft, chalky, sandy, silty.
- 4610-40** SILTSTONE 10% Red brown, arenaceous, dolomitic, blocky, white, silty, sandy, anhydrite.
 ANHYDRITE 90% White, soft, chalky, sandy, silty.
- 4640-70** SHALE 105 Red brown, silty, sandy, dolomitic, blocky, firm.
 SILTSTONE 10% White arenaceous, anhydritic, soft, chalky.
 LIMESTONE 70% Light to medium gray, silty, firm to hard, argillaceous, lithographic, mudstone.
 ANHYDRITE 10% White, soft, chalky.
- 4670-4700** SHALE 10% Red brown, silty, sandy, dolomitic, blocky, firm.
 SILTSTONE 20% White arenaceous, anhydritic, soft, chalky.
 LIMESTONE 70% Light to medium gray brown, silty, firm to hard, argillaceous, lithographic, mudstone, becoming light to medium gray brown, crystalline, dense, hard,

tight.

- 4700-30** SHALE 30% Red brown, silty, sandy, dolomitic, firm.
SILTSTONE 10% Red brown, arenaceous, argillaceous, blocky, firm, dolomitic.
SANDSTONE 20% White, clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
LIMESTONE 30% Light to medium gray brown, tan, crystalline, dense, argillaceous, lithographic, mudstone.
ANHYDRITE 10% White, soft, chalky.
- 4730-60** SHALE 30% Red brown, silty, sandy, dolomitic, firm.
LIMESTONE 30% Light to medium gray brown, tan, crystalline, dense, argillaceous, lithographic, mudstone.
ANHYDRITE 10% White, soft, chalky.
- 4760-90** LIMESTONE 100% Light to medium gray, argillaceous, lithographic, mudstone, white, soft, chalky, 20%.
- 4790-4820** LIMESTONE 100% Light to medium gray, argillaceous, lithographic, mudstone, 20% white, soft, chalky, abundant crystalline anhydrite fracture in fill.
- 4820-50** SHALE 40% Red brown, blocky, smooth, dolomitic.
LIMESTONE 50% Light to medium gray, argillaceous, lithographic, mudstone, 20% white, soft, chalky, abundant crystalline anhydrite fracture in fill.
ANHYDRITE 10% White clear, crystalline, chalky, sucrosic texture.
- 4850-80** SHALE 20% Red brown, silty, firm, dolomitic.
SILTSTONE 20% Red brown, arenaceous, dolomitic, firm, white, arenaceous, chalky, anhydritic.
LIMESTONE 60% Light to medium gray, argillaceous, lithographic, mudstone, 20% white, soft, chalky.
- 4580-4910** SHALE 10% Red brown, silty, firm, dolomitic.
SILTSTONE 10% Red brown, arenaceous, dolomitic, firm, white, arenaceous, chalky, anhydritic.
LIMESTONE 80% Light to medium gray, argillaceous, lithographic, mudstone, 20%

white, soft, chalky.

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- 4910-40 Limestone 100% Light medium gray, argillaceous, lithographic mud stone, 30% soft, chalky, abundant white, clear, crystalline, chalky, anhydrite fracture in fill.**
- 4940-70 Limestone 100% Light medium gray, argillaceous, lithographic mudstone, 30% soft, chalky, abundant white, clear, crystalline, chalky, anhydrite fracture in fill.**
- 4970-5000 Limestone 100% Light medium gray, argillaceous, lithographic mudstone, 30% soft, chalky, abundant white, clear, crystalline, chalky, anhydrite fracture in fill.**
- 5000-30 Limestone 100% Light to medium gray brown, crystalline, dense, lithographic, mudstone.**
- 5030-60 Limestone 100% Light to medium gray brown, crystalline, dense, lithographic, mudstone, 30% soft, chalky, abundant crystalline anhydrite fracture fill.**
- 5060-90 SHALE 10% Red brown, blocky, firm, dolomitic.
Limestone 50% Light to medium gray brown, crystalline, dense, lithographic, mudstone, 30% soft, chalky, abundant crystalline anhydrite fracture fill.
ANHYDRITE 40% White, chalky, crystalline, sucrosic texture, silty, translucent.**
- 5090-5120 SHALE 20% Red brown, blocky, firm, dolomitic.
Limestone 20% Light to medium gray brown, crystalline, dense, lithographic, mudstone, 30% soft, chalky, abundant crystalline anhydrite fracture fill.
ANHYDRITE 60% White, chalky, crystalline, sucrosic texture, silty, translucent.**
- 5120-50 SHALE 20% Red brown, silty, sandy, dolomitic, firm, blocky.
Limestone 20% Light to medium gray brown, crystalline, dense, lithographic, mudstone.
ANHYDRITE 20% White, chalky, soft.**
- 5150-80 SILTSTONE 40% White, arenaceous, anhydrite, matrix, firm.
SHALE 10% Red brown, silty, sandy, dolomitic, firm, blocky.
Limestone 30% Light to medium gray brown, crystalline, dense, lithographic, mudstone.
ANHYDRITE 10% White, chalky, soft.
SILTSTONE 50% White, arenaceous, anhydrite, matrix, firm.**

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- 5180-5210** SHALE 10% Red brown, silty, sandy, dolomitic, firm, blocky.
LIMESTONE 20% Light to medium gray brown, crystalline, dense, lithographic, mudstone.
ANHYDRITE 30% White, chalky, soft.
SILTSTONE 40% White, arenaceous, anhydrite matrix, firm.
- 5210-40** LIMESTONE 70% Light to medium gray brown, crystalline, dense, lithographic, mudstone.
ANHYDRITE 10% White, chalky, soft.
SILTSTONE 20% White, arenaceous, anhydrite matrix, firm.
- 5240-70** LIMESTONE 90% Light to medium gray, argillaceous, lithographic, mudstone, 10% white, soft chalky.
ANHYDRITE 10% White, soft, chalky, crystalline.
- 5270-5300** LIMESTONE 90% Light to medium gray, argillaceous, lithographic, mudstone, 10% white, soft chalky.
ANHYDRITE 10% White, soft, chalky, crystalline.
- 5300-30** LIMESTONE 100% Light to medium gray, argillaceous, lithographic, mudstone, 10% white, soft chalky.
- 5330-60** LIMESTONE 100% Light to medium gray, argillaceous, lithographic, mudstone, 10% white, soft chalky.
- 5360-90** LIMESTONE 100% light to medium gray brown, crystalline, dense, argillaceous, lithographic, mudstone.
- 5390-5420** LIMESTONE 100% Light to medium gray brown, crystalline, dense, argillaceous, lithographic, mudstone, 20% white, light gray, soft, chalky.
- 5420-50** LIMESTONE 100% Light to medium gray brown, crystalline, dense, argillaceous, lithographic, mudstone, 20% white, light gray, soft, chalky, mottled with anhydrite fracture in fill.
- 5480-80** LIMESTONE 100% Light to medium gray brown, crystalline, dense, argillaceous, lithographic, mudstone, 20% white, light gray, soft, chalky, mottled with anhydrite.
- 5480-5510** LIMESTONE 100% Light to medium gray brown, crystalline, dense, argillaceous, lithographic, mudstone, 20% white, light gray, soft, chalky, mottled with anhydrite fracture in fill.

- 5510-40** **LIMESTONE 100% Light to medium gray brown, crystalline, dense, argillaceous, lithographic, mudstone, 20% white, light gray, soft, chalky, mottled with anhydrite fracture in fill, abundant salt casts.**
- 5540-70** **SHALE 20% Red brown, blocky, dolomitic, firm, abundant salt casts.**
LIMESTONE 30% Light to medium gray brown, crystalline, dense, argillaceous, lithographic, mudstone.
SANDSTONE 30% White, clear, quartzose, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
ANHYDRITE 20% White, soft, chalky.
- 5570-5600** **SHALE 10% Red brown, blocky, dolomitic, firm, abundant salt casts.**
LIMESTONE 60% Light to medium gray brown, crystalline, dense, argillaceous, lithographic, mudstone.
SILTSTONE 20% White, red brown, arenaceous, argillaceous, dolomitic, friable.
ANHYDRITE 10% White, soft, chalky.
- 5600-30** **SHALE 30% Red brown, blocky, dolomitic, firm, abundant salt casts.**
LIMESTONE 10% Light to medium gray brown, crystalline, dense, argillaceous, lithographic, mudstone.
SILTSTONE 30% White, red brown, arenaceous, argillaceous, dolomitic, friable.
ANHYDRITE 30% White, soft, chalky.
- 5630-60** **No Sample**
- 5660-90** **No Sample**

- 5690-5720** **SHALE 30% Red brown, blocky, dolomitic, argillaceous, silty.**
SILTSTONE 20% Red brown, red orange, arenaceous, argillaceous, dolomitic, chalky, mottled.
SANDSTONE 30% White, clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
LIMESTONE 10% Light to medium gray, argillaceous, lithographic, mudstone.
ANHYDRITE 10% White, chalky, soft.

- 5720-50** SHALE 20% Red brown, blocky, dolomitic, argillaceous, silty.
SILTSTONE 50% Red brown, red orange, arenaceous, argillaceous, dolomitic, chalky, mottled.
LIMESTONE 30% Light to medium gray, argillaceous, lithographic, mudstone.
- 5750-80** SHALE 20% Red brown, blocky, dolomitic, argillaceous, silty.
SILTSTONE 50% Red brown, red orange, arenaceous, argillaceous, dolomitic, chalky, mottled.
LIMESTONE 30% Light to medium gray, argillaceous, lithographic, mudstone.
- 5780-5810** SHALE 30% Red brown, blocky, dolomitic, argillaceous, silty.
SILTSTONE 10% Red brown, red orange, arenaceous, argillaceous, dolomitic, chalky, mottled.
LIMESTONE 60% Light to medium gray, argillaceous, lithographic, mudstone.
- 5810-40** SHALE 20% Red brown, blocky, dolomitic, argillaceous, silty.
SILTSTONE 10% Red brown, red orange, arenaceous, argillaceous, dolomitic, chalky, mottled.
SANDSTONE 50% White, clear, pink, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
LIMESTONE 20% Light to medium gray, argillaceous, lithographic, mudstone.
- 5840-70** SHALE 40% Red brown, argillaceous, silty, dolomitic, abundant salt casts, potash.
SILTSTONE 10% Red orange, arenaceous, floating quartz grains, chalky, soft to firm dolomitic.
SANDSTONE 30% White, clear, quartzose, fine to medium grained, sub angular to rounded, fair to poor sorted, unconsolidated.
LIMESTONE 20% Light medium gray, argillaceous, lithographic, mudstone.
- 27
- 5870-5900** SHALE 10% Red brown, argillaceous, silty, dolomitic, abundant salt casts, potash.
SILTSTONE 60% Red orange, arenaceous, floating quartz grains, chalky, soft to firm dolomitic.
LIMESTONE 30% Light to medium gray, argillaceous, lithographic, mudstone.
- 5900-30** SHALE 10% Red brown, argillaceous, silty, dolomitic, abundant salt casts, potash.
SILTSTONE 30% Red orange, arenaceous, floating quartz grains, chalky, soft to firm dolomitic.
LIMESTONE 60% Light to medium gray, argillaceous, lithographic, mudstone.
- 5930-60** SHALE 30% Red brown, blocky, firm.

SILTSTONE 10% Red brown, arenaceous, silty, argillaceous.
LIMESTONE 60% Light to medium gray brown, lithographic, argillaceous, mudstone.

- 5960-90** **SHALE 20% Red brown, blocky, firm.**
 SILTSTONE 10% Red brown, arenaceous, silty, argillaceous.
 LIMESTONE 30% Light to medium gray brown, lithographic, argillaceous, mudstone.
 SANDSTONE 20% White, clear, quartzose, fine to medium grained, sub angular to rounded, poor to fair sorted, arenaceous.
 ANHYDRITE 20% White, clear, crystalline, sucrosic texture.
- 5690-6020** **SHALE 30% Red brown, blocky, firm.**
 SILTSTONE 20% Red brown, arenaceous, silty, argillaceous.
 LIMESTONE 40% Light to medium gray brown, lithographic, argillaceous, mudstone.
 ANHYDRITE 20% White, soft, chalky.
- 6020-50** **SHALE 10% Red brown, blocky, dolomitic, firm.**
 SILTSTONE 20% Red brown, blocky, arenaceous, argillaceous, dolomitic.
 LIMESTONE 70% Gray brown, argillaceous, lithographic, mudstone.
- 6050-80** **SHALE 30% Red brown, blocky, dolomitic, firm.**
 SILTSTONE 10% Red brown, blocky, arenaceous, argillaceous, dolomitic.
 LIMESTONE 60% Gray brown, argillaceous, lithographic, mudstone.
- 6080-6110** **SHALE 20% Red brown, blocky, dolomitic, firm.**
 SILTSTONE 10% Red brown, blocky, arenaceous, argillaceous, dolomitic.
 LIMESTONE 70% Gray brown, argillaceous, lithographic, mudstone.
- 28**
- 6110-40** **SHALE 10% Red brown, dolomitic, blocky.**
 LIMESTONE 90% Light to medium gray, dolomitic, crystalline, dense, argillaceous, lithographic, mudstone.
- 6140-70** **LIMESTONE 100% Light to medium gray, dolomitic, crystalline, dense, argillaceous, lithographic, mudstone.**
- 6170-6200** **LIMESTONE 100% Light to medium gray brown, tan, crystalline, dense, micro-crystalline, packstone to grainstone, pellets, oolitic, with mudstone matrix.**
- 6200-30** **LIMESTONE 100% Medium to dark gray brown, crystalline, dense, microcrystalline, packstone to grainstone, pellets, oolitic, with mudstone matrix.**
- 6230-60** **LIMESTONE 100% Light to medium gray brown, medium to dark gray brown, crystalline, dense, mottled, pellets, oolitic, packstone to grainstone with mudstone matrix, argillaceous,**

lithographic, mudstone in part.

- 6260-97 Limestone 100% Medium to dark gray, argillaceous, dense, lithographic, mudstone.**
- 6297-6320 Limestone 100% Light to medium gray, argillaceous, earthy, chalky, lithographic, mudstone, medium to dark gray, hard, argillaceous, lithographic, microcrystalline, mudstone, abundant floating black asphaltic tar.**
- 6320-50 Limestone 100% Light to medium gray, argillaceous, earthy, chalky, lithographic, mudstone, medium to dark gray hard, argillaceous, lithographic, microcrystalline, mudstone, abundant floating black asphalt tar, becoming, light brown, packstone to grainstone, pellets, oolitic, with mudstone matrix, mottled.**
- 6350-80 Limestone 100% Light brown, tan, packstone to grainstone, pellets, oolitic, mudstone matrix, white, silty, sandy, chalky, mud tone.**
- 6380-6410 Limestone 100% Light brown, tan, packstone to grainstone, pellets, oolitic, mudstone matrix, white, silty, sandy, chalky, mudstone, medium to dark gray brown.**
- 6410-40 Limestone 100% White, tan, mottled, sandy, sucrosic texture, scattered oolites, microcrystalline, dense, hard, tight.**

29

- 6440-70 Limestone 10% White, tan, mottled, sandy, sucrosic texture, scattered oolites, microcrystalline, dense, hard, tight.
Sandstone 90% White, light brown, clear, quartzose, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, brown oil stain, strong hydrocarbon odor, rainbows on wash water, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow to gold residual ring, 8-12% intergranular porosity, 60% unconsolidated.**
- 6470-6500 Sandstone 100% White, pink, red orange, quartzose, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, brown oil stain, strong hydrocarbon odor, rainbows on wash water, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow to gold residual ring, 8-12% intergranular porosity, abundant white anhydrite matrix, 70% unconsolidated.**
- 6500-30 Sandstone 100% White, pink, red orange, quartzose, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, brown oil stain, strong hydrocarbon odor, rainbows on wash water, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow to gold residual ring, 8-12% intergranular porosity, abundant white quartz flour, 70% unconsolidated.**

- 6530-60** SANDSTONE 100% White, clear, quartzose, fine to coarse grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, brown oil stain, strong hydrocarbon odor, rainbows on wash water, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow to gold residual ring, 8-12% intergranular porosity, abundant white quartz flour, 98% unconsolidated.
- 6560-90** SANDSTONE 100% White, clear, quartzose, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, brown oil stain, strong hydrocarbon odor, rainbows on wash water, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow to gold residual ring, 8-12% intergranular porosity, abundant white quartz flour, 98% unconsolidated.
- 6590-6620** SANDSTONE 100% White, clear, quartzose, fine to coarse grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, brown oil stain, strong hydrocarbon odor, rainbows on wash water, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow to gold residual ring, 8-12% intergranular porosity, abundant white quartz flour, 98% unconsolidated.
- 30**
- 6620-50** SANDSTONE 100% White, clear, quartzose, fine to coarsely grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, brown oil stain, strong hydrocarbon odor, rainbows on wash water, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow to gold residual ring, 8-12% intergranular porosity, abundant white quartz flour, 98% unconsolidated.
- 6650-80** SANDSTONE 100% White, clear, quartzose, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, brown oil stain, strong hydrocarbon odor, rainbows on wash water, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow to gold residual ring, 8-12% intergranular porosity, abundant white quartz flour, 80% unconsolidated.
- 6680-6710** SHALE 20% Red brown, silty, blocky, dolomitic, blocky, firm.
SILTSTONE 30% Red brown, brick red, green, argillaceous, dolomitic, firm to hard.
SANDSTONE 50% White, very fine to fine grained, sub angular, fair to well sorted, clay matrix, siliceous cement, tight, no show.
- 6710-40** SHALE 10% Red brown, silty, blocky, dolomitic, blocky, firm.
SILTSTONE 30% Red brown, brackish red, green, argillaceous, dolomitic, firm to hard.
SANDSTONE 70% White, very fine to fine grained, sub angular, fair to well sorted, clay matrix, siliceous cement, tight, no show.

- 6740-70 **SANDSTONE 100% White, clear, quartzose, light brown, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 98% unconsolidated, brown oil stain, strong hydro carbon odor, rainbows and flecks, yellow white oil fluorescence, yellow white milky cut fluorescence, yellow gold residual ring, 10-14% intergranular porosity.**
- 6770-6800 **SANDSTONE 100% White, clear, quartzose, light brown, fine to coarse grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 98% unconsolidated, brown oil stain, strong hydrocarbon odor, rainbows and flecks, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow gold residual ring, 10-14% intergranular porosity.**
- 31
- 6800-30 **SANDSTONE 100% White, clear, quartzose, light brown, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 95% unconsolidated, brown oil stain, strong hydrocarbon odor, rainbows and flecks, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow gold residual ring, 10-14% intergranular porosity.**
- 6830-60 **SANDSTONE 100% White, clear, quartzose, light brown, fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 95% unconsolidated, brown oil stain, strong hydrocarbon odor, rainbows and flecks, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow gold residual ring, 10-14% intergranular porosity.**
- 6860-90 **SANDSTONE 100% White, clear, quartzose, light brown, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 95% unconsolidated, brown oil stain, strong hydro carbon odor, rainbows and flecks, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow gold residual ring, 10-14% intergranular porosity.**
- 6890-6920 **SANDSTONE 100% White, clear, quartzose, light brown, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 95% unconsolidated, brown oil stain, strong hydrocarbon odor, rainbows and flecks, yellow to white oil fluorescence, yellow to white milky cut fluorescence, yellow gold residual ring, 10-14% intergranular porosity, weaker show mixed zone.**
- 6920-50 **SANDSTONE 100% White, clear, quartzose, light brown, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 98% unconsolidated, brown oil stain, strong hydrocarbon odor, rainbows and flecks, yellow to**

white oil fluorescence, yellow to white milky cut fluorescence, yellow gold residual ring, 10-14% intergranular porosity, weak to no show.

6950-80 SANDSTONE 100% White, clear, quartzose, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 8-14% intergranular porosity, no show, 98% unconsolidated.

6980-7010 SANDSTONE 100% White, clear, quartzose, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 8-14% intergranular porosity, 85% unconsolidated, no show.

32

7010-40 SANDSTONE 100% White, clear, quartzose, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 8-14% intergranular porosity, 90% unconsolidated, no show.

7040-70 SANDSTONE 100% White, clear, quartzose, very fine to coarsely grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 8-14% intergranular porosity, 95% unconsolidated, no show.

7070-7100 SANDSTONE 100% White, clear, quartzose, very fine to coarsely grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 8-14% intergranular porosity, 98% unconsolidated, no show.

7100-30 SANDSTONE 100% White, clear, quartzose, very fine to medium grained, sub angular to rounded, fair to poor sorted, clay matrix, siliceous cement, friable, 8-14% intergranular porosity, 98% unconsolidated, no show.



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155



IN REPLY REFER TO
3180
UT-922

February 8, 2006

Wolverine Gas and Oil Corporation
Attn: Richard D. Moritz
One Riverfront Plaza
55 Campau, N.W.
Grand Rapids, Michigan 49503-2616

CONFIDENTIAL

Re: 5th Revision of the Navajo Formation PA
Wolverine Unit
Sanpete and Sevier Counties, Utah

Gentlemen:

The 5th Revision of the Navajo Formation Participating Area, Wolverine Unit, UTU80800A, is hereby approved effective as of January 1, 2006, pursuant to Section 11 of the Wolverine Unit Agreement, Sanpete and Sevier Counties, Utah.

The 5th Revision of the Navajo Formation Participating Area results in an addition of 240.40 acres to the participating area for a total of 1,039.17 acres and is based upon the completion of Well No. 18-1, API No. 43-041-30034, located in Lot 12 of Section 18, Township 23 South, Range 1 West (BHL), SLM&B, Federal Unit Tract No. 6, Federal Lease UTU73528 and Well No. 20-1, API No. 43-041-30032, located in NW ¼ NW ¼ of Section 20, Township 23 South, Range 1 West (BHL), SLM&B, Federal Unit Tract No. 6, Federal Lease UTU73528, as being wells capable of producing unitized substances in paying quantities.

Copies of the approved request are being distributed to the appropriate agencies and one copy is returned herewith. Please advise all interested parties of the establishment of the 5th Revision of the Navajo Formation Participating Area, Wolverine Unit, and the effective date.

Sincerely,

/s/ Douglas F. Cook

Douglas F. Cook
Chief, Branch of Fluid Minerals

Enclosure

CONFIDENTIAL J

RECEIVED

FEB 10 2006

DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: Wolverine Gas and Oil Company of Utah, LLC Operator Account Number: N 1655
Address: 55 Campau NW, One Riverfront Plaza
city Grand Rapids
state MI zip 49503-2616 Phone Number: (616) 458-1150

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304130032	Wolverine Federal 20-1		NWSE	20	23S	1W	Sevier
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
C	14885	13995	8/9/2005		3/9/06		
Comments: SHL: SESW, Sec 17 <i>Unit PA expanded</i> <i>NAVA</i> CONFIDENTIAL J							

Well 2

17

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304130034	Wolverine Federal 18-1		SESE	18	23S	1W	Sevier
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
C	14917	13995	9/6/2005		3/9/06		
Comments: SHL: SESW, Sec. 17 <i>Unit PA expanded</i> <i>NAVA</i> CONFIDENTIAL J							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
Comments: RECEIVED MAR 06 2006							

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

DIV. OF OIL, GAS & MINING

Edward A. Higuera
Name (Please Print)
Edward A. Higuera
Signature
Manager - Development 3/3/2006
Title Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

COPY

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator **Wolverine Gas and Oil Company of Utah, LLC**

3a. Address
55 Campau NW, Grand Rapids, MI 49503

3b. Phone No. (include area code)
616-458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface: **829' FSL & 1928' FWL, Sec. 17, T23S, R01W, SLB&M**
Bottom-Hole: **188' FSL & 142' FEL, Sec. 18, T23S, R01W, SLB&M**

5. Lease Serial No.
UTU-73528

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
Wolverine Federal Exploration Unit

8. Well Name and No.
Wolverine Federal 18-1

9. API Well No.
43-041-30034

10. Field and Pool, or Exploratory Area
Covenant Field

11. County or Parish, State
Sevier County, Utah

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input checked="" type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

A workover was performed on the Wolverine Federal 18-1 to increase production by cleaning out the well and acidizing the Navajo Formation perforated at 6738' - 6820'. The work detailed on the attached pages is summarized as follows:

1. The well was circulated with workover fluid, wellhead removed, BOPE installed, and ESP equipment pulled. A bit and casing scraper were tripped to PBTD and well was circulated clean.
2. Communication behind casing was verified by swabbing with a packer between each perforation interval.
3. The three perforation sets were swabbed together to determine pre-stimulation swab rate.
4. All perforations (6738' - 6820') were pulse washed using coiled tubing and 60 Bbls of 15% HCl acid with additives and another 35 Bbls of acid were displaced into the perforations (pumped total of 4000 gallons 15% HCl acid).
5. Spent acid was recovered using coiled tubing and jetting nitrogen.
6. The three perforation sets were swabbed together to determine post-stimulation swab rate.
8. New ESP equipment was run in the well and the well was returned to production.

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Ellis M. Peterson

Title **Sr. Production Engineer**

Signature

Date

11/20/2006

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

NOV 27 2006

DIV. OF OIL, GAS & MINING

Daily Workover Report

page 1 of 4

Wolverine Gas & Oil Company of Utah, LLC
Wolverine Federal #18-1 well
SE SW Sec 17 T23S - R01W
Sevier Co., Utah

"TIGHT HOLE"

- 10/28/06 **FIRST REPORT-** MIRUSU, drop bar to open drain sub (41-½" long x 7/8" diameter rod) hookup rig pump to csg, pump 218 bbls filtered 4% KCl down csg annulus @ 1bpm @ 1600-1800 psi (capacity 204 bbl to drain sub) displacing tbg down flowline to main treater, unknown volume returned to production. Switch to tbg, pressure to 2500 psi shut down due to pressure and rig pump not able to pump slow rate, SWI SDFN. CMOL: Jay Rasmussen
- 10/29/06 7am hookup rig pump to csg, pump 65 bbls filtered 4% KCl down csg annulus @ 1bpm@ 1800 psi. Switch to tbg, pump 17 bbl @ 3500 psi. ND wellhead, NU 5m double hydraulic BOP w/annular. RU Baker Centrilift cable spooler, POOH with 219 jts of 2 7/8" tbg spooling cable on reel. Cable damaged in 3 spots, LD pump, seal, motor & assy. All downhole equipment was visually inspected in good condition, slight scale on outside of motor, build up in bottom of mud anchor, three different samples were taken from mud anchor, pump intake, and outside of motor, will be taken to Tony in morning, desander torn up on one side of 7" wire cup, all ESP equipment delivered to Baker Centrilift Casper location next am for inspection. CMOL: Jay Rasmussen
- 10/30/06 7am PU csg scraper for 7" 23 ppf csg & strap in hole with 218 jts tbg (6687') PU 13 jts and tag btm @ 7069' KB. Tbg string weighing 46,000 # set 20 points down started reverse circulate hole with 80 bbls of 4% KCl, no returns were noticed, clean bottom, spotted 15 bbls of pickle fluid down tbg into rathole mixed with 1 gal Cortron RN-234 corrosion inhibitor & 1 gal Bactron Biocide. Displace with 40 bbls 4% KCl, POOH with tbg & scraper, SWI SDFN @ 6pm. CMOL: Jay Rasmussen
- 10/31/06 7am Hold safety meeting, Make up 7" TS retrievable bridge plug, HD packer & SN w/ marker sub one jt above pkr. TIH with 2 7/8" tbg to 6815'. RU Excell Wireline, RIH with GR-CCL, ran correlation strip, tbg tally 9 ft deep to log, made -9 ft correction in tally and placed tbg on depth with open hole log dated 5/27/2005. Set RBP @ 6835' below zone # 3. Set pkr @ 6810' above zone # 3 ran GR-CCL check strip OK. Landed tbg in BOP. PU 2 7/8" swab equipment & lubricator hookup to wellhead. RIH with swab hit fluid 100' from surface pull from 800' check annulus have vacuum, make two more swab runs last pull from 3000' still getting communications. Release pkr, reset @ 6808' pull 2 swabs, annulus on vacuum, Initial fluid level 100' down from surface, Final fluid level 2200', Total bbls recovered 41, SWI SDFN @ 6 pm. CMOL: Jay Rasmussen
- 11/01/06 7am Hold safety meeting, Release Pkr, & latch on RBP move above zone #1 in blank pipe, test Pkr & RBP to 750 psi OK, Release Pkr & RBP reset RBP @ 6835' and Pkr @ 6765, straddle zones #2 & #3 , make 2 swabs runs, communicated with zone #1, strong vacuum on annulus. Move Pkr, above zone # 1 set @6690, Pressure test annulus @ 1000 psi OK. 11am RU swab equipment, 11:25am start swabbing, IFL 700', FFL 5200', total fluid recovered 122 bbls in 6 hrs. , last hour recovered 11 bbls in 3 runs pulling from SN @ 6685', last hour samples 30% water. SWI, SDFN @ 6:00pm CMOL: Jay Rasmussen
- 11/02/06 7am Hold safety meeting, RU swab equipment, 8:15am start swabbing, IFL 50', FFL 5600', total fluid recovered 102 bbls in 4 hrs, last hour recovered 25 bbls in 3 runs pulling from SN @ 6685', last hour samples 12% water. 1:15pm MIRU Halliburton CT Unit, SWI, SDFN @ 4:30pm CMOL: Jay Rasmussen

CONFIDENTIAL

Daily Workover Report

page 2 of 4

Wolverine Gas & Oil Company of Utah, LLC
Wolverine Federal #18-1 well
SE SW Sec 17 T23S - R01W
Sevier Co., Utah

"TIGHT HOLE"

- 11/03/06 6am install pulse tool to CT, NU injector to wellhead, hold safety meeting, Pressure test coil reel & flowback lines to 1900 psi, OK. 9:30 TIH with 1 1/2" coil tbg tag RBP @ 6841 circulate 30 bbls 4% KCl up 2 7/8" tbg to clear oil from tbg, pump WO fluid down tbg 1 BPM @ 1500 psi to establish pump-in rate and check for communications, pressure washed zones #1, #2 & #3 (6820'-6738') with 20 bbls 15 % HCl @ 1bpm @ 3600 CT psi, displace with 20 bbls of 4% KCl, @ 1 bpm @ 2064 psi, pressure washed zones #1, #2 & #3 with 20 bbls 15% HCl @ 1 bpm @ 3800 CT psi, displace with 20 bbls of 4% KCl @ 1 bpm @ 2069 psi, pressure washed zones #1, #2 & #3 with 20 bbls 15 % HCl @ 1 bpm @ 3714 CT psi, displace with 20 bbls of 4% KCl @ 1 bpm @ 2200 psi, gear box on CT unit breaks, 6:05pm displace remaining 35 bbls acid down tbg @ 1 bpm @ 2181 psi, 11pm POOH with CT & pulse tool.
CMOL: Jay Rasmussen
- 11/04/06 1am TIH with CT & wash nozzle tag RBP @ 6841, 4:00am pumping 300 scfm N/2 circulating fluids back to frac tank, total fluid returns 138 bbls, made 3 runs to wash off RBP, 9:15am POOH with CT & wash nozzle, RDMO CT unit & equipment. 12:30pm RU swab equipment, 12:30pm Start swabbing, IFL 1300', FFL 5400', total fluid recovered 86 bbls in 4 hrs, last hr recovered 19 bbls in 3 runs pulling from 6500', last hr samples 6% water, SWI SDFWE @ 5:15 pm.
CMOL: Jay Rasmussen
- 11/05/06 SDFD
- 11/06/06 7am SITP 300 psi, hold safety meeting, RU swab equipment, 8:15am Start swabbing IFL surface FFL 5800' total fluid recovered 62 bbls, last hr recovered 14 bbls in 3 runs pulling from 6200', last hr samples 2% water, 11:00am lost swab mandrel & knuckle joint in tbg, fill tbg with 8 bbls 4% KCl, release Pkr & reverse circulate up tbg, pump swab mandrel & knuckle joint into TIW valve, latch on to RBP, POOH with Tbg, Pkr & Rbp, SWI, SDFN @ 5:30pm.
CMOL: Jay Rasmussen
- 11/7/06 7am Hold safety meeting, RU to run tbg & ESP, Baker Centrilift personnel on location, 8:45 TIH with ESP & 214 jts tbg strapping with 3 SS bands per jt, ND BOP, NU wellhead, hookup flowlines, start well @ 5:45pm
CMOL: Jay Rasmussen
- 11/8/06 7am on location, talk with pumper, well quit pumping during night, got with Tony Cook & filled 7" annulus to surface with 71 bbls 4% KCl, well went to pumping, 1pm RDMOSU, **Turn Well Over To Production @ 1pm 11/8/06, Thank You !**
CMOL: Jay Rasmussen

Daily Workover Report

page 3 of 4

Wolverine Gas & Oil Company of Utah, LLC
Wolverine Federal #18-1 well
SE SW Sec 17 T23S - R01W
Sevier Co., Utah

"TIGHT HOLE"

Production Tubing Setting - ran in hole on 11/07/2006				
	Description	SN	Length	Top @ kb
1	3.75" od, Centinel 2250 BHP sensor	55C0000772	4.10	
1	4.50"od, 35hp, 960v,24a,FMB motor	21F0069823	10.68	6582md
1	4.0"od, FSB3 SSEV seal	10241080	5.59	6576md
1	4.0"od, type P-6, model 400 PSHD, 72 stg pump w intake	10241495	9.00	6567md
1	2-3/8" x 2-7/8" EUE 8rd xover		.75	
1	2-7/8", 6.5#, N80, EUE, 8rd handling sub		6.12	
1	Tubing 2-7/8", 6.5#, L-80, EUE, 8rd tbj joint		30.51	
1	Drain Sub 2-7/8", EUE, 8rd		.84	6529 md
11	Tubing 2-7/8", 6.5#, L-80, EUE, 8rd tbj joints		338.81	
1	SN 2-7/8", EUE, 8rd, 2.25" ID		1.10	6189md
202	Tubing 2-7/8", 6.5#, L-80, EUE, 8rd tbj joints		6183.07	
214	Overall length		6596.57	
	Set below KB 15' (GL to KB = 17') less- 9' WL correct		+6.00	
	EOT set @ KB		6596.57	
	EOT 6597'kb md; intake @ 6576'kb md (6138' tvd)			

11/9/06 Pump well on test; problems require pulling well again.
Thru
11/14/06

11/15/06 2pm Drop bar to open drain sub (6' long x 7/8" pony rod) hookup rig pump to csg, pump 260 bbls filtered 4% KCl down csg annulus @ 1-1/2 bpm @ 0 psi displacing tbj down flowline to main treater, unknown volume returned to production.
CMOL: Jay Rasmussen

11/16/06 11am MIRUSU ND wellhead, NU 5m double hydraulic BOP w/annular. RU Baker Centrilift cable spooler, POOH with 214 jts of 2-7/8" tbj spooling cable on reel, repair 2 bad places in wire, Centrilift techs hookup meg meter, short in cable, spool & cable needs to be hot shot to Rangeley, Colorado shop for testing, LD pump, seal, motor & assy. All downhole equipment was visually inspected in good condition, all ESP equipment will be delivered to Baker Centrilift Casper location, on returning truck.
CMOL: Jay Rasmussen

11/17/06 7am Run sensor, motor, seal & pump. SWIFD @ 10am. Waiting on cable reel to be returned.
CMOL: Steve Hash

Daily Workover Report

page 4 of 4

Wolverine Gas & Oil Company of Utah, LLC
Wolverine Federal #18-1 well
SE SW Sec 17 T23S - R01W
Sevier Co., Utah

"TIGHT HOLE"

- 11/18/06 7am Hold safety meeting, received cable reel & replacement pump from Rangely shop, found & repaired one damage. RU to run tbg, splice motor lead, 9am TIH with ESP & 214 jts tbg strapping cable with 1 SS band 1 ft above and 1 ft below each tbg cplg only. 3pm land tbg, ND BOP, splice pigtail, NU wellhead, hookup flowlines, start well @ 4:30pm, well pumped up in 7 min. Turned well over to pumper and switched well into test. SD @ 6pm
CMOL: Steve Hash
- 11/19/06 8am Well pumping, hold safety mtg, tear down & rack up pump, tank & lines. Release all rental equipment & ship filter unit & BOPE to Vernal. RDMO WSU, clean location and SD @ 4pm. Rig will road to shop on Monday. **FINAL WORKOVER REPORT – Thanks for the work!** CMOL: Steve Hash

Production Tubing Setting - ran in hole on 11/18/2006

	Description	SN	Length	Top @ kb
1	3.75" od, Centinel 2250 BHP sensor (used)	55C0000772	4.10	
1	4.50"od, 35hp, 960v,24a,FMD motor (used)	21F0069923	14.78	6585md
1	4.00"od, FSB3 SSCV seal (used)	10241080	5.59	6579md
1	4.00"od, type P-4, model 400 PSHD, 118 stg pump w intake (new)	10273048	12.00	6567md
1	2-3/8" x 2-7/8" EUE 8rd xover		.75	
1	2-7/8", 6.5#, N80, EUE, 8rd handling sub		6.12	
1	Tubing 2-7/8", 6.5#, L-80, EUE, 8rd tbg joint		30.51	
1	Drain Sub 2-7/8", EUE, 8rd		.84	6529 md
1	Tubing 2-7/8", 6.5#, L-80, EUE, 8rd tbg joints		30.80	
1	SN 2-7/8", EUE, 8rd, 2.25" ID		1.10	6497md
212	Tubing 2-7/8", 6.5#, L-80, EUE, 8rd tbg joints		6491.08	
214	Overall length		6597.67	
	Set below KB 15' (GL to KB = 17") less- 9' WL correct		+6.00	
	EOT set @ KB		6603.67	
	EOT 6604'kb md; intake @ 6579'kb md (6140' tvd)			

COPY

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator **Wolverine Gas and Oil Company of Utah, LLC**

3a. Address
55 Campau NW, Grand Rapids, MI 49503

3b. Phone No. (include area code)
616-458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface: **829' FSL & 1928' FWL, Sec. 17, T23S, R01W, SLB&M**
Bottom-Hole: **248' FSL & 52' FEL, Sec. 18, T23S, R01W, SLB&M**

5. Lease Serial No.
UTU-73528

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
Wolverine Federal Exploration Unit

8. Well Name and No.
Wolverine Federal 18-1

9. API Well No.
43-041-30034

10. Field and Pool, or Exploratory Area
Covenant Field

11. County or Parish, State
Sevier County, Utah

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input checked="" type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input checked="" type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

A recompleat workover is planned for the Wolverine Federal 18-1 well. It is planned to place a cement plug across the perforation intervals currently producing from the Lower Navajo and perforate five selected intervals in the Upper Navajo at depths from 6560' to 6675'. It is also planned to acid stimulate each newly perforated interval. This well will produce from the Upper Navajo following the recompleat. The proposed recompleat activities are expected to commence as soon regulatory approval is received and as early as October 1, 2007.

See the attached procedure for details of planned activities.

The current Lower Navajo completion in the subject well is producing inefficiently, but the well is positioned to very effectively produce oil and drain reserves from Upper Navajo. Approval has been granted to drill the Wolverine Federal 17-9 well, an offset to the Wolverine Federal 18-1, and drilling operations on the 17-9 well are to commence immediately. The 17-9 well will be positioned to be a better Lower Navajo producer than the 18-1 well, and combined plans for the two wells will result in most effective recovery of oil reserves from both Upper and Lower Navajo.

Attachment: Wolverine Federal 18-1 Recompleat Procedure

10-5-07
RM

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Ellis M. Peterson

Title **Sr. Production Engineer**

Signature

Ellis M. Peterson

Date

09/14/2007

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Accepted by the
Utah Division of
Oil, Gas and Mining

Office

9/28/07

Federal Approval Of This
Action Is Necessary

RECEIVED

SEP 1 / 2007

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

DIV. OF OIL, GAS & MINING

WOLVERINE GAS & OIL COMPANY OF UTAH, LLC

Recompletion Procedure

Wolverine Federal 18-1 Covenant Field

Purpose: Plug back Lower Navajo perforations and recomplete to the Upper Navajo.

Note: This procedure is based on conditions existing prior to and situations and results anticipated during the well work activities. Actions and methods will deviate from this procedure as warranted by actual circumstances.

PERTINENT INFORMATION

Location: 829' FSL, 1928' FWL (SESW)
Section 17, Township 23 South, Range 1 West
Sevier County, Utah

Elevation: 5839' GL, 5856' KB

TD: 7130'

PBTD: 7086' (cement top)

API No.: 43-041-30034

Casing: 13-3/8", 61.0# @ 2001', cemented to surface
9-5/8", 47.0#, HCP-110, LT&C @ 6278', 230 sks 50:50 Poz (1.71 yld)
7", 23.0#, HCP-110, LT&C @ 7129', 190 sks 50:50 Poz (1.23 yld)

Wellhead: Tubing Head Flange – 7-1/16" 5k w/ 2-7/8" EUE top connection

Tubing: 6527' (213 jts) of 2-7/8", 6.5#, N-80, EUE, 8rd tubing plus subs, SN, drain sub, and ESP equipment.

Production Casing Specs: 7", 23.0#, HCP-110, LT&C, 8rd, ID: 6.366" Drift: 6.241"
Collapse: 5650 psi Burst: 8720 psi (80% 6976 psi)

Tubing Specs: 2-7/8", 6.5#, N-80, EUE, 8rd, ID: 2.441" Drift: 2.347"
Collapse: 11,170 psi Burst: 10,570 psi (80% 8456 psi)
Joint: 145,000 lbs (80% 116,000 lbs)

Capacities: 7", 23.0#: 0.03936 Bbls/ft 0.2210 ft³/ft
2-7/8", 6.5# 0.00579 Bbls/ft 0.0325 ft³/ft
7" x 2-7/8" Annulus 0.0313 Bbls/ft 0.1759 ft³/ft

BH Temperature: 186 °F @ 6660' MD (6220' TVD)

Current Lower Navajo Formation Completion Interval: 6738' – 6820' (12/19/05)

Current Perforations:

6738' - 6757' MD (6297' – 6316' TVD), 19', 76 holes
6773' - 6803' MD (6332' – 6361' TVD), 30', 120 holes
6815' - 6820' MD (6373' – 6378' TVD), 5', 20 holes

Proposed Upper Navajo Formation Completion Interval: 6560' – 6675'

Proposed Perforations:

6560' - 6580' MD (6121' – 6141' TVD), 20', 120 holes

6590' - 6610' MD (6151' – 6171' TVD), 20', 120 holes

6621' - 6635' MD (6182' – 6195' TVD), 14', 84 holes

6647' - 6653' MD (6207' – 6213' TVD), 6', 36 holes

6670' - 6675' MD (6230' – 6235' TVD), 5', 30 holes

Perforation Depths are referenced to Halliburton SDL-DSN-GR dated 09/30/05.
CBL-GR-CCL dated 12/18/05 is on depth to open-hole logs at perforation depth.

PROCEDURE

1. Prepare well and location for workover.
2. MIRUSU. Open drain sub and circulate produced water to kill well. Disconnect flow lines, ND wellhead, and NU BOP.
3. RU cable spoolers. POOH and lay down ESP equipment. RD cable spoolers.
4. RIH with a 6-1/8" bit and casing scraper and tag PBTD (last tagged @ 7069'). Spot 10 Bbls of 10 ppg salt brine containing recommended biocide and corrosion inhibitor to fill casing below perforations. POOH with bit and casing scraper.
5. RIH with 2-7/8" tubing and a collar (or wireline re-entry guide) on bottom to 6300'.
6. RU production logging service. Run a third party Gyro/CCL survey (directional survey) from PBTD to surface. Release third party directional log service.
7. Run temperature and pump-in tracer surveys to determine contributing completed zones in Lower Navajo.
8. RD and release production logging service. POOH with tubing.
9. RIH with a CIBP and setting tool on 2-7/8" tubing and set CIBP at 6830' MD WLM.
10. RU cementers and place a 50 sack balanced plug on top of the CIBP to plug back the Lower Navajo perforations. Reverse circulate cement out to 6710' WLM.
11. Tag new PBTD depth. RU and swab the fluid level down to approximately 1000'. POOH with tubing.
12. RU Halliburton wireline unit. Perforate the bottom two completion intervals of Upper Navajo at 6670' - 6675', and 6647' - 6653' WLM with 6 SPF and 6' of Stimgun sleeve. RD and release wireline unit.
13. RIH with a 7" (23#) RBP, retrieving head, 2 joints of tubing, 7" (23#) packer, and seating nipple on 2-7/8" tubing. Set RBP below 6690' and packer above 6580'. RU and swab the two open zones together for rate and clean-up.
14. RU Halliburton and acid stimulate the two isolated zones using 500 gallons of 15% FE acid for tube clean, 732 gallons of Clay-Safe H (5% HCl acid), 1100 gallons of Sandstone Completion Acid (13.5/1.5% HCl/HF), and 630 gallons of Clayfix 5 (5% Ammonium Chloride).
15. Open well and flow/swab back for cleanup.

16. Release packer and RBP. Reset RBP at 6642' WLM. Swab fluid level in well down to 1000'. POOH with packer and tubing.
17. RU Halliburton wireline unit. Perforate 6621' - 6635' WLM with 6 SPF and 9' of Stimgun sleeve. RD and release wireline unit.
18. RIH with a RBP retrieving head, 2 joints of tubing, 7" (23#) packer, and seating nipple on 2-7/8" tubing. Set packer above 6555'. RU and swab the isolated zone for rate and clean-up.
19. RU Halliburton and acid stimulate the isolated zone using 928 gallons of Clay-Safe H (5% HCl acid), 1400 gallons of Sandstone Completion Acid (13.5/1.5% HCl/HF), and 630 gallons of Clayfix 5 (5% Ammonium Chloride).
20. Open well and flow/swab back for cleanup.
21. Reset tools and check for behind-pipe communication between current top two zones, then reset RBP at 6616' WLM. Swab fluid level in well down to 1000'. POOH with packer and tubing.
22. RU Halliburton wireline unit. Perforate 6590' - 6610' WLM with 6 SPF and 9' of Stimgun sleeve. RD and release wireline unit.
23. RIH with a RBP retrieving head, 2 joints of tubing, 7" (23#) packer, and seating nipple on 2-7/8" tubing. Set packer above 6525'. RU and swab the isolated zone for rate and clean-up.
24. RU Halliburton and acid stimulate the isolated zone using 1328 gallons of Clay-Safe H (5% HCl acid), 2000 gallons of Sandstone Completion Acid (13.5/1.5% HCl/HF), and 630 gallons of Clayfix 5 (5% Ammonium Chloride).
25. Open well and flow/swab back for cleanup.
26. Reset tools and check for behind-pipe communication between current top two zones, then reset RBP at 6586' WLM. Swab fluid level in well down to 1000'. POOH with packer and tubing.
27. RU Halliburton wireline unit. Perforate 6560' - 6580' WLM with 6 SPF and 9' of Stimgun sleeve. RD and release wireline unit.
28. RIH with a RBP retrieving head, 2 joints of tubing, 7" (23#) packer, and seating nipple on 2-7/8" tubing. Set packer above 6490'. RU and swab the isolated zone for rate and clean-up.
29. RU Halliburton and acid stimulate the isolated zone using 1328 gallons of Clay-Safe H (5% HCl acid), 2000 gallons of Sandstone Completion Acid (13.5/1.5% HCl/HF), and 630 gallons of Clayfix 5 (5% Ammonium Chloride).
30. Open well and flow/swab back for cleanup.
31. Reset tools and check for behind-pipe communication between top two zones, then release packer and RBP and POOH with tubing and tools.
32. If well is capable of flowing, RIH with a tubing collar (or wireline re-entry guide), 7" (23#) packer, and SN on 2-7/8" tubing, and set packer at $\pm 6470'$ WLM. Land tubing, ND BOP and NU wellhead. RU, swab well in, and turn to production.

If well is to be pumped, details for installing a Y-tool and pumping equipment will be provided.

33. RDMOSU.
34. Plan to run a production log and possibly obtain a pressure build-up as soon as well production stabilizes.



**WOLVERINE GAS AND OIL COMPANY
OF UTAH, LLC**

Energy Exploration in Partnership with the Environment

September 14, 2007

Mr. Bert Hart
Fluid Minerals Group
Bureau of Land Management
Richfield Field Office
150 East 900 North
Richfield, Utah 84701

COPY

Re: Sundry Notice - Wolverine Gas and Oil Company of Utah, LLC
Wolverine Federal 18-1

Dear Mr. Hart:

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) hereby submits the enclosed Sundry Notice in triplicate for the Wolverine Federal 18-1. This Sundry Notice requests approval to recompleate and acid stimulate the subject well. As soon as regulatory approval is obtained, we hope to commence the proposed activities.

The recompletion of the Wolverine Federal 18-1 is now a priority over the recently submitted Wolverine Federal 17-5 and 17-6 recompletion notices because the 18-1 well is experiencing mechanical difficulties and could be temporarily shut-in if this planned workover is delayed. Therefore, your assistance in expediting approval of this Sundry Notice is respectfully requested.

Please accept this letter as Wolverine's written request for confidential treatment of all information contained in and pertaining to this notice.

Please advise if you have any questions or need additional information.

Sincerely,

Ellis M. Peterson
Senior Production Engineer
Wolverine Gas and Oil

cc: UDOGM w/ attachments in duplicate

RECEIVED
SEP 1 / 2007
DIV. OF OIL, GAS & MINING



**WOLVERINE GAS AND OIL COMPANY
OF UTAH, LLC**

Energy Exploration in Partnership with the Environment

December 21, 2007

Mr. Bert Hart
Fluid Minerals Group
Bureau of Land Management
Richfield Field Office
150 East 900 North
Richfield, Utah 84701

Re: Sundry Notice - Wolverine Gas and Oil Company of Utah, LLC
Wolverine Federal 18-1

Dear Mr. Hart:

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) hereby submits the enclosed Sundry Notice in triplicate for the Wolverine Federal 18-1. This Sundry Notice is a subsequent report for the recompletion work recently completed on the subject well. A Gyrodata Directional Survey for the Wolverine Federal 18-1 that was obtained in conjunction with the workover is also included herewith.

Please accept this letter as Wolverine's written request for confidential treatment of all information contained in and pertaining to this notice.

Please advise if you have any questions or need additional information.

Sincerely,

Ellis M. Peterson
Senior Production Engineer
Wolverine Gas and Oil

RECEIVED

JAN 02 2008

cc: ~~UDOGM~~ w/ attachments in duplicate

DIV. OF OIL, GAS & MINING

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. UTU-73528
2. Name of Operator Wolverine Gas and Oil Company of Utah, LLC		6. If Indian, Allottee or Tribe Name
3a. Address 55 Campau NW, Grand Rapids, MI 49503	3b. Phone No. (include area code) 616-458-1150	7. If Unit or CA/Agreement, Name and/or No. Wolverine Unit
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Surface: 829' FSL & 1928' FWL, Sec. 17, T23S, R01W, SLB&M Bottom-Hole: 248' FSL & 52' FEL, Sec. 18, T23S, R01W, SLB&M		8. Well Name and No. Wolverine Federal 18-1
		9. API Well No. 43-041-30034
		10. Field and Pool, or Exploratory Area Covenant Field
		11. County or Parish, State Sevier County, Utah

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

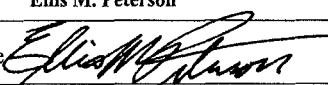
TYPE OF SUBMISSION	TYPE OF ACTION				
<input type="checkbox"/> Notice of Intent	<input checked="" type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off	
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input checked="" type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____	
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon		
	<input type="checkbox"/> Convert to Injection	<input checked="" type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal		

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompletable horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletable in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

A recompletable workover was completed on the Wolverine Federal 18-1 well. The Lower Navajo perforations at 6738' to 6820' were plugged back using 50 sacks of Class "G" cement and the Upper Navajo was perforated in five select intervals at depths of 6560' to 6675'. The new perforation intervals were individually acid stimulated and the well was returned to production. New PBTD is 6712'.

See the attached summary for details of the completed work.

Attachment: Workover Summary and Results

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Ellis M. Peterson		Title Sr. Production Engineer
Signature 		Date 12/20/2007

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____	Title _____	Date _____
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		
Office _____		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

JAN 02 2008

DIV. OF OIL, GAS & MINING

Workover Summary and Results

Wolverine Federal 18-1

Covenant Field

September 27, 2007 to December 12, 2007

Purpose of Workover: Recomplete from Lower Navajo to Upper Navajo

Work Summary:

1. Conducted pump-in tracer survey over Lower Navajo and ran a gyro deviation survey.
2. Set CIBP at 6834' and placed 50 sack Class "G" cement plug across Lower Navajo perforations at 6738' - 6757', 6773' - 6803', and 6815' - 6820' from CIBP at 6834' to new PBTD of 6712'.
3. Wireline perforated 6670' - 6675' and 6647' - 6653' with 6 SPF and 3' of StimGun per interval.
4. Unsuccessfully attempted to break down perforations with 7-1/2" HCl acid at pressures up to 4000 psi.
5. Used Halliburton Hydrojet tool to cut three holes per setting at depths of 6674', 6671', 6653', and 6649'.
6. Wireline perforated 6621' - 6635' with 6 SPF and 9' of StimGun.
7. Halliburton acidized 6621' - 6675' with 700 gallons Clay Safe H (5% HCl) and 1400 gallons Sandstone Completion Acid (13.5% HCl/1.5% HF) at 0.7 BPM and 3750 psi.
8. Wireline set a CBP at 6618' and perforated 6590' - 6610' with 6 SPF.
9. Halliburton acidized 6590' - 6610' with 900 gallons FE (7-1/2% HCl), 1300 gallons Clay Safe H (5% HCl), and 2000 gallons Sandstone Completion Acid (13.5% HCl/1.5% HF) with 1 lb/perf of Benzoic Acid to divert 30% of perforations at 1.5 BPM and 4500 psi.
10. Wireline set a CBP at 6588' and perforated 6560' - 6580' with 6 SPF.
11. Halliburton acidized 6560' - 6580' with 1000 gallons FE (7-1/2% HCl), 1800 gallons Clay Safe H (5% HCl), and 1800 gallons Sandstone Completion Acid (13.5% HCl/1.5% HF) with 1 lb/perf of Benzoic Acid to divert 30% of perforations at 2.1 BPM and 2850 psi.
12. Drilled out CBP at 6588' and CBP at 6618'.
13. Ran Weatherford Y-Tool and ESP. Placed well on production.
14. Pulled ESP because it had plugged with sand and CBP materials, and re-ran Y-Tool and new ESP.

Abandoned Perforations: (Lower Navajo)

6738' - 6757' MD (6297' - 6316' TVD), 19', 76 holes

6773' - 6803' MD (6332' - 6361' TVD), 30', 120 holes

6815' - 6820' MD (6373' - 6378' TVD), 5', 20 holes

Active Perforations: (Upper Navajo)

6560' - 6580' MD (6121' – 6141' TVD), 20', 120 holes
 6590' - 6610' MD (6151' – 6171' TVD), 20', 120 holes
 6621' - 6635' MD (6182' – 6195' TVD), 14', 84 holes
 6647' - 6653' MD (6207' – 6213' TVD), 6', 36 holes
 6670' - 6675' MD (6230' – 6235' TVD), 5', 30 holes
 6674, 6671', 6653', and 6649', 3 Hydrojet holes each, 12 holes

Production before Workover: 69 BOPD, 7 BWPD

Production after Workover: 597 BOPD, 0 BWPD

New PBTD: 6712' (cement top)

PI Tracer Log results: Injected 500 BWPD at 1150 psi
 34% into 6738' - 6757'
 47% into 6773' - 6803'
 19% into 6815' - 6820'

Gyro Results: MD to TVD correction is -431' at perforation depths (compared to -441' with drilling directional surveys)

A Gyrodata Directional Survey

for

WOLVERINE OIL & GAS

Lease: Covenant Field Well: 18-1 , 7" Casing

Location: LOBO #1, Sevier County, Utah

Job Number: RM1007G_486

Run Date: 10/11/2007 1:07:00 PM

Surveyor: Mark Borino; Lucas Dunalp

Calculation Method: MINIMUM CURVATURE

Survey Latitude: 38.800054 deg. N Longitude: 111.916943 deg. W

Azimuth Correction:

Gyro: Bearings are Relative to True North

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

A Gyrodata Directional Survey

Wolverine Oil & Gas

Lease: Covenant Field Well: 18-1 , 7" Casing

Location: LOBO #1, Sevier County, Utah

Job Number: RM1007G_486

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
0.00	0.00	0.00	N 0 0 E	0.00	0.00	0.0 0.0	0.00 N 0.00 E

0 - 7000 FT. RATE GYROSCOPIC MULTISHOT SURVEY RUN INSIDE 7" CASING							
AL MEASURED DEPTHS AND COORDINATES REFERENCED TO LOBO #1 R.K.B. OF 17 FT.							

100.00	0.29	210.09	S 30 6 W	0.29	100.00	0.3 210.1	0.22 S 0.13 W
200.00	0.62	229.35	S 49 21 W	0.36	200.00	1.0 220.0	0.80 S 0.67 W
300.00	1.84	256.39	S 76 24 W	1.31	299.97	3.0 239.9	1.53 S 2.64 W
400.00	2.66	258.74	S 78 44 W	0.83	399.89	6.9 250.0	2.36 S 6.47 W
500.00	3.03	263.30	S 83 18 W	0.43	499.77	11.8 254.7	3.12 S 11.37 W
600.00	3.39	269.51	S 89 31 W	0.50	599.61	17.3 258.5	3.45 S 16.95 W
700.00	3.42	273.54	N 86 28 W	0.24	699.44	23.1 261.8	3.29 S 22.88 W
800.00	3.44	276.38	N 83 37 W	0.17	799.26	29.0 264.5	2.78 S 28.84 W
900.00	3.51	278.53	N 81 28 W	0.15	899.07	34.9 266.7	1.99 S 34.85 W
1000.00	4.21	275.19	N 84 49 W	0.73	998.85	41.6 268.3	1.20 S 41.53 W
1100.00	6.04	261.42	S 81 25 W	2.20	1098.45	50.4 268.1	1.66 S 50.39 W
1200.00	7.20	254.81	S 74 49 W	1.39	1197.78	61.8 266.2	4.08 S 61.65 W
1300.00	8.31	253.35	S 73 21 W	1.12	1296.86	75.0 264.0	7.80 S 74.62 W
1400.00	9.15	254.01	S 74 1 W	0.85	1395.71	90.0 262.3	12.06 S 89.18 W
1500.00	10.07	253.54	S 73 33 W	0.93	1494.30	106.5 261.0	16.72 S 105.20 W
1600.00	11.60	251.28	S 71 17 W	1.59	1592.52	125.1 259.7	22.43 S 123.11 W
1700.00	12.76	248.83	S 68 50 W	1.27	1690.26	146.0 258.3	29.64 S 142.93 W
1800.00	12.79	247.36	S 67 22 W	0.33	1787.79	167.8 256.9	37.89 S 163.45 W
1900.00	13.49	247.20	S 67 12 W	0.69	1885.17	190.2 255.8	46.67 S 184.41 W
2000.00	15.74	247.47	S 67 28 W	2.25	1981.93	215.2 254.8	56.38 S 207.69 W
2100.00	17.99	248.84	S 68 50 W	2.29	2077.63	244.0 254.0	67.15 S 234.62 W
2200.00	19.22	247.40	S 67 24 W	1.31	2172.40	275.8 253.3	79.05 S 264.21 W

A Gyrodata Directional Survey

Wolverine Oil & Gas
Lease: Covenant Field Well: 18-1 , 7" Casing
Location: LOBO #1, Sevier County, Utah
Job Number: RM1007G_486

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
2300.00	22.94	243.84	S 63 51 W	3.93	2265.70	311.4 252.4	93.97 S 296.91 W
2400.00	23.95	243.17	S 63 10 W	1.04	2357.44	350.8 251.4	111.73 S 332.51 W
2500.00	25.48	242.98	S 62 59 W	1.53	2448.28	392.2 250.5	130.66 S 369.78 W
2600.00	26.25	242.75	S 62 45 W	0.78	2538.26	435.5 249.8	150.56 S 408.61 W
2700.00	26.77	242.07	S 62 4 W	0.60	2627.75	479.8 249.1	171.23 S 448.17 W
2800.00	27.34	245.88	S 65 53 W	1.82	2716.81	525.1 248.6	191.16 S 489.02 W
2900.00	28.09	249.36	S 69 22 W	1.79	2805.35	571.5 248.6	208.85 S 532.02 W
3000.00	25.92	248.16	S 68 9 W	2.24	2894.44	616.9 248.6	225.28 S 574.34 W
3100.00	25.53	246.67	S 66 40 W	0.75	2984.53	660.3 248.5	241.95 S 614.42 W
3200.00	26.61	248.67	S 68 40 W	1.39	3074.35	704.3 248.5	258.63 S 655.07 W
3300.00	27.86	250.78	S 70 47 W	1.58	3163.27	750.0 248.5	274.47 S 698.00 W
3400.00	25.89	248.90	S 68 54 W	2.14	3252.46	795.2 248.6	290.02 S 740.44 W
3500.00	26.07	248.34	S 68 20 W	0.30	3342.35	839.0 248.6	305.99 S 781.23 W
3600.00	24.63	252.66	S 72 39 W	2.35	3432.73	881.8 248.7	320.32 S 821.54 W
3700.00	23.38	256.47	S 76 28 W	1.99	3524.09	922.2 249.0	331.17 S 860.72 W
3800.00	23.54	258.97	S 78 58 W	1.01	3615.83	961.6 249.3	339.63 S 899.61 W
3900.00	24.65	261.73	S 81 44 W	1.58	3707.12	1001.7 249.8	346.45 S 939.85 W
4000.00	26.39	262.63	S 82 38 W	1.78	3797.36	1043.8 250.3	352.30 S 982.53 W
4100.00	26.43	262.20	S 82 12 W	0.20	3886.92	1087.3 250.8	358.17 S 1026.61 W
4200.00	25.40	259.81	S 79 48 W	1.47	3976.87	1130.3 251.2	364.99 S 1069.77 W
4300.00	27.00	255.73	S 75 44 W	2.41	4066.60	1174.2 251.4	374.38 S 1112.88 W
4400.00	26.98	251.01	S 71 1 W	2.14	4155.72	1219.5 251.5	387.36 S 1156.33 W
4500.00	25.28	252.95	S 72 57 W	1.90	4245.50	1263.5 251.5	401.00 S 1198.19 W
4600.00	26.75	249.71	S 69 42 W	2.04	4335.37	1307.4 251.5	415.07 S 1239.72 W
4700.00	26.40	246.52	S 66 31 W	1.47	4424.81	1352.0 251.4	431.74 S 1281.22 W
4800.00	27.89	245.16	S 65 10 W	1.61	4513.79	1397.4 251.2	450.42 S 1322.85 W
4900.00	26.95	240.68	S 60 41 W	2.27	4602.56	1443.0 250.9	471.35 S 1363.84 W

A Gyrodata Directional Survey

Wolverine Oil & Gas

Lease: Covenant Field Well: 18-1 , 7" Casing

Location: LOBO #1, Sevier County, Utah

Job Number: RM1007G_486

MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
5000.00	26.11	236.35	S 56 21 W	2.11	4692.04	1486.6 250.6	494.64 S 1401.92 W
5100.00	25.66	239.14	S 59 9 W	1.30	4782.01	1529.2 250.2	517.94 S 1438.82 W
5200.00	25.79	247.36	S 67 22 W	3.57	4872.13	1572.2 250.0	537.42 S 1477.50 W
5300.00	24.58	254.97	S 74 58 W	3.45	4962.65	1614.7 250.0	551.19 S 1517.67 W
5400.00	25.48	260.09	S 80 5 W	2.35	5053.27	1656.6 250.2	560.29 S 1558.95 W
5500.00	27.98	257.53	S 77 32 W	2.75	5142.58	1701.1 250.5	569.06 S 1603.06 W
5600.00	29.18	252.44	S 72 26 W	2.71	5230.40	1748.7 250.6	581.49 S 1649.21 W
5700.00	28.29	250.41	S 70 25 W	1.32	5318.09	1796.8 250.6	596.79 S 1694.77 W
5800.00	25.23	251.17	S 71 10 W	3.07	5407.37	1841.8 250.6	611.61 S 1737.28 W
5900.00	22.80	253.06	S 73 4 W	2.55	5498.71	1882.5 250.6	624.14 S 1776.00 W
6000.00	22.31	255.51	S 75 31 W	1.06	5591.06	1920.8 250.7	634.54 S 1812.92 W
6100.00	18.40	257.90	S 77 54 W	4.00	5684.80	1955.3 250.8	642.59 S 1846.74 W
6200.00	16.34	256.55	S 76 33 W	2.09	5780.24	1985.0 250.9	649.17 S 1875.85 W
6300.00	13.16	258.29	S 78 18 W	3.22	5876.93	2010.3 251.0	654.76 S 1900.69 W
6400.00	11.68	249.58	S 69 35 W	2.38	5974.60	2031.7 251.0	660.60 S 1921.32 W
6500.00	10.47	240.44	S 60 26 W	2.13	6072.74	2050.8 251.0	668.62 S 1938.71 W
6600.00	9.57	236.37	S 56 22 W	1.15	6171.21	2067.7 250.9	677.70 S 1953.54 W
6700.00	8.92	234.65	S 54 39 W	0.70	6269.91	2083.2 250.8	686.79 S 1966.78 W
6800.00	8.34	237.38	S 57 23 W	0.71	6368.78	2097.8 250.6	695.19 S 1979.21 W
6900.00	8.05	233.56	S 53 34 W	0.62	6467.76	2111.5 250.5	703.26 S 1990.95 W
7000.00	8.20	238.07	S 58 4 W	0.65	6566.76	2125.2 250.4	711.18 S 2002.64 W

Final Station Closure: Distance: 2125.17 ft Az: 250.45 deg.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator **Wolverine Gas and Oil Company of Utah, LLC**

3a. Address
55 Campau NW, Grand Rapids, MI 49503

3b. Phone No. (include area code)
616-458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface: 829' FSL & 1928' FWL, Sec. 17, T23S, R01W, SLB&M
Bottom-Hole: 248' FSL & 52' FEL, Sec. 18, T23S, R01W, SLB&M

5. Lease Serial No.
UTU-73528

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
Wolverine Unit

8. Well Name and No.
Wolverine Federal 18-1

9. API Well No.
43-041-30034

10. Field and Pool, or Exploratory Area
Covenant Field

11. County or Parish, State
Sevier County, Utah

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Workover
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompletable horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletable in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Wolverine Gas & Oil Co. of Utah, LLC intends to workover the Wolverine Federal 18-1. The current perforations in this well are underperforming and the well has seen significant decline with little increase in water production. Existing perforations in the Navajo are planned to be stimulated with acid and fracture treated. The well will be returned to production once an ESP and y-tool are run.

COPY SENT TO OPERATOR

Date: 3-22-2012

Initials: KS

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Matthew Rivers

Title **Production Engineer**

Signature

[Signature]

Date

03/02/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

[Signature]

Title

Pet Eng

Date

3/21/12

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

DOG M

Federal Approval Of This
Action Is Necessary

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(Instructions on page 2)

RECEIVED

MAR 09 2012

DIV. OF OIL, GAS & MINING

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

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11. County or Parish, State
Sevier County, Utah

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<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Workover
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
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A fracture stimulation was pumped through existing perforations at 6560' - 6580' starting by setting a RBP at 6585'. 100 bbls of 4% KCl was pumped in the mention perforations for a DFIT analysis at 5.2 BPM and 4810 psi down 2-7/8" tubing. A subsequent fracture stimulation was pumped with 1953 bbls of 35# Borate x-linked gel with 21,100 lbs of 20/40 ceramic proppant at 20 BPM down 3-1/2" tubing. The job pressured out prematurely at 9300 psi and coil tubing was brought in to wash out the tubing full of sand. Upon picking up the RBP the well was also found to be full of sand below the plug which was subsequently reversed out with tubing. Deducting the proppant left in the tubing and beneath the plug, approximately 11,000 lbs of proppant was placed into formation. The well was put back on pump (ESP & y-tool) and turned over to production on July 3, 2012

See activity report and WBD for additional details.

RECEIVED

JUL 23 2012

DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Matthew Rivers

Title **Production Engineer**

Signature



Date

07/17/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

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Title

Date

Office

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Covenant Field
Federal 18-1
API# 43-041-30034

Section 17, Township 23 South, Range 1 West
Sevier County, Utah

6/13/2010 Hauled in and set frac tanks, flow back lines, light plants and pipe racks. Anchor service tested rig anchors.

6/14/2012 MIRUSU, ND wellhead, NU BOP's. RU cable spooler and pulled out of hole with ESP. Tripped in hole with bit and casing scraper to 1500'. SWIFN
Plan to finish RIH with bit and scraper / POOH with bit and scraper / TIH with DFIT BHA / Pump DFIT

6/15/2012 Opened well, 0 psi. Finished tripping in hole with bit and casing scraper to PBTD at 6712', RU pump lines and reverse circulated oil out of hole with 250 bbls of 4% KCL water, RD pump lines. Pulled out of hole with bit and casing scraper, PU and run in hole with DFIT BHA and 208 joints of 2 7/8" tubing to surface. Set RBP at 6585', set packer at 6344' with the pressure gauges located at 6379'. RU slickline unit and RIH with 1.8" gauge ring and tagged the XN nipple at 6364', pulled out of hole with gauge ring. RU Halliburton's pump lines, opened bypass on packer and circulated 50 bbls of 4% KCL water, closed bypass on packer, RU slickline unit and run in hole with N-test tool to 6309'. Pumped DFIT as follows:

<u>Detail</u>	Bbls	Cumm	Max BPM	Max PSI
1. Loaded hole with 4% KCL water	2	2	2	150
2. Pumped 4% KCL water	100	102	5.2	4810
3. Reduced rate and set plug in the XN nipple	1	103	1.2	3200

Note: Shut in the tubing with 3750 psi
See DFIT BHA tab for details on the bottom hole assembly.
Plan to pull the N-test tool in 24 hours then recover the bottom hole pressure gauges when the tubing is pulled on 6/17/2012.

6/16/2012 Opened well, 4300 psi on tubing, 1000 psi on casing. Blew down pressure, RU slickline unit and retrieved N-test tool. SWIFN

6/17/2012 Opened well, 0 psi tubing, 0 psi casing. Pulled out of hole with tubing and packer, PU and run in hole with 7" HD packer and 204 joints of 3 1/2" P-110 tubing, set packer at 6405'. RU pump lines and pressure tested packer to 1000 psi. SWIFN
Plan to leave well shut in until the frac date on 6/25/12

6/18/2012 Waiting on frac crew

6/19/2012 Waiting on frac crew

6/20/2012 Waiting on frac crew

6/21/2012 Waiting on frac crew

6/22/2012 Waiting on frac crew

6/23/2012 Waiting on frac crew

6/24/2012 Waiting on frac crew

6/25/2012 Waiting on frac crew

6/26/2012 Waiting on frac crew

6/27/2012 Waiting on frac crew

6/28/2012 RU Halliburton frac equipment to pump 73,500 pounds of 20/40 CarboProp proppant at a max concentration of 5 ppg with 35# Borate Crosslinked Gel (Hybor G) at 25 BPM. Screened out 21,000 lbs into job midway through 3 ppg stage with max treating pressure of 9300 psi and rate of 20 BPM.

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Pre-Treatment Diagnostic:

Pumped 201 Bbls of linear gel for pre-treatment analysis ramping up rate in 4 BPM increments to 20 BPM. Max treating pressure 8700 psi. Shut-in and analyzed fall-off.

Surface ISIP/Frac gradient: 4,103 psi 1.041 psi/ft

Near-wellbore pressure drop: 3,602 psi

Perforation friction: 2,765 psi

Perforations open: 5 of 120

Treatment Pad:

Pumped 1467 Bbls of cross-linked pad at 18.5 BPM average rate and 8500 psi average pressure. Pad stages included 1000 gallon 0.5 ppg and 1.0 ppg proppant slugs spaced in between 20,000 gallon pad stages. Proppant slugs appeared to remove some near wellbore pressure drop by reducing treatment pressure.

Proppant Laden Stages:

Pumped initial 1.0 ppg stage away at 7200 psi and 20 BPM. Pressure declined from 7900 to 7200 psi by the end of the stage. Ramped up to 3 ppg as planned and treating pressure quickly flattened out from its decline and began to steadily increase to 9300 psi and job pressured out midway through 3 ppg stage. Was not able to displace/flush sand in wellbore. Left tubing full with 3 ppg proppant. Plan to wash out with coil tubing.

Results:

Cum Proppant Volume Pumped: 22,100 lbs

Cum Clean Fluid Volume Pumped: 1953 bbls

Tubing/Casing Volume: 62.4 bbls to mid-perf

Proppant left in wellbore (3 ppg): 7900 lbs

Bulk proppant volume below bridge plug: 3050 lbs (see 7/2/2012)

Calculated Proppant Volume in Formation: 11,150 lbs

6/29/2012

Waiting on coiled tubing unit

6/30/2012

RU coiled tubing unit at 17:00 hrs, cleaned out sand from 1200' to the retrievable plug at 6585'. RD and released coiled tubing unit. SWIFN

Plan to lay down 3 1/2" frac string / run in hole with 2 7/8" tubing / swab for rate and clean up.

7/1/2012

Opened well, 0 psi tubing, 0 psi casing. Released packer and pulled out of hole laying down 3 1/2" frac string. Picked up and run in hole with retrieving head, 4 joints, packer and 2 7/8" tubing. Set packer at 6290', rigged up swab equipment and swabbed well as follows.

Swab runs - 10

Water cut - 98%

Average rate - 375 bfpd

Average fluid level - 3725

Total fluid recovered - 72 bbls

Perf intervals open -6560'-6580'

See 7-1 Swab report for details.

Plan to reverse circulate clean to RBP / pull out of hole with tubing and prepare to run ESP

7/2/2012

Opened well, 0 psi tubing, 0 psi casing. Released packer, RU pump lines and reverse circulated sand off of retrievable plug, RD pump lines. Released retrievable plug and was unable to move plug down hole, pulled out of hole laying down packer and plug. Run in hole with tubing and notched collar and tagged sand top at 6590', RU pump lines and reverse circulated sand out to PBTD at 6712'. Pulled out of hole with tubing and SWIFN.

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Note: Apparently the sand channeled behind pipe between perf interval 6580' & 6590' then entered a lower perf interval. There were no signs of passage by the retrievable plug.

Plan to install ESP and turn well into production.

<u>7/3/2012</u>	Opened well, 0 psi tubing, 0 psi casing. RU cable spoolers, PU and run in hole with Centralizer, Centinel, motor, seal, pump, 2 7/8" x 2 3/8" xo, 2 3/8" sub, Y-tool, 2 3/8" x 2 7/8" xo, 2 7/8" sub, 2 joints, cup type SN and 204 joints 2 7/8" L-80 tubing. ND BOP's, NU wellhead. Started well and turned into production.
<u>7/4/2012</u>	6.5 Hour production, 000 bopd, 080 bwpd, 45 Hz, BHP 1754
<u>7/5/2012</u>	24 Hour production, 000 bopd, 294 bwpd, 45 Hz, BHP 1755
<u>7/6/2012</u>	24 Hour production, 001 bopd, 294 bwpd, 45 Hz, BHP 1751
<u>7/7/2012</u>	24 Hour production, 000 bopd, 223 bwpd, 45 Hz, BHP 1640
<u>7/8/2012</u>	24 Hour production, 089 bopd, 156 bwpd, 45 Hz, BHP 1781
<u>7/9/2012</u>	24 Hour production, 096 bopd, 153 bwpd, 45 Hz, BHP 1815
<u>7/10/2012</u>	24 Hour production, 131 bopd, 130 bwpd, 45 Hz, BHP 1612

Supervisor:

Tony E. Cook

Rig Operator:

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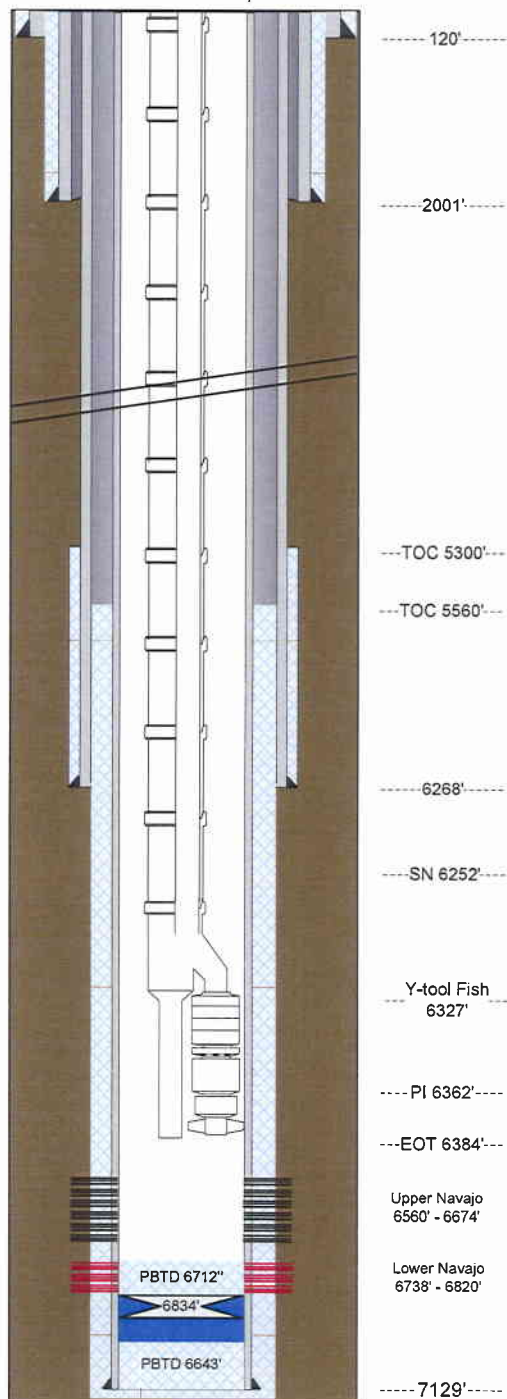
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Wolverine Federal 18-1
API # 43-041-30034
Covenant Field
Section 17, T23S, R1W
Sevier County, Utah

Ground Elevation: 5,839'
 KB Elevation: 5,856'



(Not to Scale)

Deviated Well

Surface: 829' FSL 1928' FWL, SE SW, 17-23S-1W
 Top of Pay (6457' MD): 248' FSL, 52' FEL, SE SE, 18-23S-1W
 Total Depth (7130' MD): 188' FSL, 142' FEL, SE SE, 18-23S-1W

Conductor Casing (09/05)

Size: 20", 0.25" wall
 Depth Landed: 120'
 Cement Data: Cemented to surface with 785 sks Class "G"

Surface Casing (9/12/05)

Size/Wt/Grade: 13-3/8", 61#, J-55, STC, 8rd
 Depth Landed: 2001' MD
 Cement Data: 490 sks CBM Light (10.5 ppg, 4.13 cf/sk), 380 sks Type V (15.6 ppg, 1.18 cf/sk), Top job w/ 189 sks Class "G"

Intermediate Casing (9/27/05)

Size/Wt/Grade: 9-5/8", 47#, HCP-110, LTC, 8rd
 Depth Landed: 6278' MD
 Cement Data: 230 sks 50:50 Poz (13.0 ppg, 1.71 cf/sk)

Production Casing (10/1/05)

Size/Wt/Grade: 7", 23#, HCP-110, LTC, 8rd
 Properties: 8720 psi burst, 6.241" drift, 6.366" ID, 0.0393 Bbl/ft Capacity
 Depth Landed: 7129' MD
 Cement Data: 190 sks 50:50 Poz (14.4 ppg, 1.23 cf/sk)

Navajo Perforations

6560' - 6580' MD (6132'-6152' TVD), 20', 120 holes (11/05/07)
 6590' - 6610' MD (6161'-6181' TVD), 20', 120 holes (10/29/07)
 6621' - 6635' MD (6192'-6206' TVD), 14', 084 holes (10/22/07)
 6647' - 6653' MD (6218'-6224' TVD), 06', 036 holes (10/11/07)
 6670' - 6675' MD (6240'-6245' TVD), 05', 030 holes (10/11/07)
 6649' - 6653', 6671', & 6674' - Hydro Jet 012 holes (10/18/07)

Mid-Perf = 6618' MD (6188' TVD), 65' M (64.1' TV), 402 holes

6738' - 6757' MD (6297'-6316' TVD), 19', 076 holes (12/19/05) Plugged
 6773' - 6803' MD (6332'-6361' TVD), 30', 120 holes (12/19/05) Plugged
 6815' - 6820' MD (6373'-6378' TVD), 05', 020 holes (12/19/05) Plugged

Tubing (7/3/2012)

End of BHA 6384' WLM (5959' TVD)
 Centinel 6379' WLM (5954' TVD)
 Pump intake 6362' WLM (5937' TVD)
 Y-Tool Fish 6327' WLM (5903' TVD)
 Seating Nipple 6252' WLM (5380' TVD)

PBTD

(11/20/05) Tubing tagged cement top @ 7086' MD
 (10/30/06) Tagged fill @ 7069' MD
 (10/11/07) Wireline tag cement top @ 6712' MD-WLM

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Wolverine Federal 18-1
API # 43-041-30034
Covenant Field
Section 17, T23S, R1W
Sevier County, Utah

Tubing Detail (6/27/08)

	17.00	KB
	-2.00	Landed above GL
204	6251.28	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	1.10	SN - 2-7/8", EUE, 8rd, 2.25" ID
2	63.14	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	6.04	Handling Sub - 2-7/8", 6.5#, L-80, EUE, 8rd
1	0.77	X-over - 2-3/8" x 2-7/8", EUE, 8rd
1	4.04	Y-Tool - Weatherford 2-3/8" EUE w/ blanking plug in place (1.053" drift)
1	10.02	Sub - 2-3/8", 4.7#, L-80, EUE, 8rd
1	0.77	X-over - 2-3/8" x 2-7/8", EUE, 8rd
1	24.27	Pump w/ Intake - Centrilift P-18 134 stage 400PLSXD
1	6.09	Seal - Model FSB3DB H6 FER SSCV SB/SB PFSA HL
1	10.67	Motor - Centrilift 54 HP 1020 V 35 A 450 MSP
1	4.10	Pressure sensor - Centinel 5000C
1	0.40	Centralizer - 2-3/8" EUE
	-14.00	Wireline correction
<hr/>		
	6383.69'	(5959' TVD)

Note: No check or drain plug in this well.

Tubing capacity = 0.00579 Bbl/ft, Burst = 10570 psi, Joint Yield = 144960 lbs

Directional Data:

<u>MD</u>	<u>TVD</u>	<u>Incl.</u>	<u>MD</u>	<u>TVD</u>	<u>Incl.</u>
500	500	3.0	4000	3797	26.4
1000	999	4.2	4500	4246	25.3
1500	1494	10.1	5000	4692	26.1
1750	1739	12.8	5500	5143	28.0
2000	1982	15.7	6000	5591	22.3
2250	2219	21.1	6500	6073	10.5
2500	2448	25.5	7000	6567	8.2
2750	2672	27.1	7130	6695	8.2 E
3000	2894	25.9			

Wellhead Information

- Tubing head flange is 7-1/16", 5M with a 2-7/8" EUE 8rd top connection.

Stimulation

12/21/05: 6738' - 6820' w/ 5500 gal 7.5% HCl. Attempted to isolate and treat individual zones.

Communicated between all three perforation intervals. BDP = 3200 psi, ISDP = 2350 psi

11/03/06: 6738' - 6820' w/ 4000 gal 15% HCl with 30 gpt Morflo, 1 gpt Lowsurf-300M, 2 gpt Pen-88, 1 gpt AS-9, 6 gpt HAI-404 inhibitor, 10gpt Fe-7A & 50gpt Fe-2 iron sequestering agents.

Pulse washed all perforations using coiled tubing. FTP = 2181 psi @ 1 BPM.

06/28/12: 6560' - 6580' fracture treated w/82,000 gallons of 35# Borate Hybor G and 22,100 lbs of 20/40 CarboProp Ceramic proppant. ATP = 7200 psi, ATR = 20 BPM. Screened out with estimated 11,000 lbs of proppant in formation. Wellbore was packed with proppant below RBP at 6585'. See workover activity report for additional details.

Notes

Surface Location: Latitude = 38° 47' 51.0945", Longitude = -111° 56' 05.0611"

(12/18/05): Cement top at 5542' on CBL-CCL-GR

(9/26/06): Available Logs: HRI, SDL/DSN, EMI, CBL, Halliburton Directional Log

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TEC 7/11/12

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator **Wolverine Gas and Oil Company of Utah, LLC**

3a. Address
55 Campau NW, Grand Rapids, MI 49503

3b. Phone No. (include area code)
616-458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface: **829' FSL & 1928' FWL, Sec. 17, T23S, R01W, SLB&M**
Bottom-Hole: **188' FSL & 142' FEL, Sec. 18, T23S, R01W, SLB&M**

5. Lease Serial No.
UTU-73528

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
Wolverine Unit

8. Well Name and No.
Wolverine Federal 18-1

9. API Well No.
43-041-30034

10. Field and Pool, or Exploratory Area
Covenant Field

11. County or Parish, State
Sevier County, Utah

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Workover
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

A fracture stimulation was pumped through existing perforations at 6560' - 6580' starting by setting a RBP at 6585'. 100 bbls of 4% KCl was pumped in the mention perforations for a DFIT analysis at 5.2 BPM and 4810 psi down 2-7/8" tubing. A subsequent fracture stimulation was pumped with 1953 bbls of 35# Borate x-linked gel with 21,100 lbs of 20/40 ceramic proppant at 20 BPM down 3-1/2" tubing. The job pressured out prematurely at 9300 psi and coil tubing was brought in to wash out the tubing full of sand. Upon picking up the RBP the well was also found to be full of sand below the plug which was subsequently reversed out with tubing. Deducting the proppant left in the tubing and beneath the plug, approximately 11,000 lbs of proppant was placed into formation. The well was put back on pump (ESP & y-tool) and turned over to production on July 3, 2012

See activity report and WBD for additional details.

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Richfield BLM Field Office

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Matthew Rivers

Title **Production Engineer**

Signature



Date

07/17/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

Accepted For Record Purposes



Covenant Field
Federal 18-1
API# 43-041-30034

Section 17, Township 23 South, Range 1 West
Sevier County, Utah

6/13/2010 Hauled in and set frac tanks, flow back lines, light plants and pipe racks. Anchor service tested rig anchors.

6/14/2012 MIRUSU, ND wellhead, NU BOP's. RU cable spooler and pulled out of hole with ESP. Tripped in hole with bit and casing scraper to 1500'. SWIFN

Plan to finish RIH with bit and scraper / POOH with bit and scraper / TIH with DFIT BHA / Pump DFIT

6/15/2012 Opened well, 0 psi. Finished tripping in hole with bit and casing scraper to PBTD at 6712', RU pump lines and reverse circulated oil out of hole with 250 bbls of 4% KCL water, RD pump lines. Pulled out of hole with bit and casing scraper, PU and run in hole with DFIT BHA and 208 joints of 2 7/8" tubing to surface. Set RBP at 6585', set packer at 6344' with the pressure gauges located at 6379'. RU slickline unit and RIH with 1.8" gauge ring and tagged the XN nipple at 6364', pulled out of hole with gauge ring. RU Halliburton's pump lines, opened bypass on packer and circulated 50 bbls of 4% KCL water, closed bypass on packer, RU slickline unit and run in hole with N-test tool to 6309'. Pumped DFIT as follows:

<u>Detail</u>	Bbls	Cumm	Max BPM	Max PSI
1. Loaded hole with 4% KCL water	2	2	2	150
2. Pumped 4% KCL water	100	102	5.2	4810
3. Reduced rate and set plug in the XN nipple	1	103	1.2	3200

Note: Shut in the tubing with 3750 psi

See DFIT BHA tab for details on the bottom hole assembly.

Plan to pull the N-test tool in 24 hours then recover the bottom hole pressure gauges when the tubing is pulled on 6/17/2012.

6/16/2012 Opened well, 4300 psi on tubing, 1000 psi on casing. Blew down pressure, RU slickline unit and retrieved N-test tool. SWIFN

6/17/2012 Opened well, 0 psi tubing, 0 psi casing. Pulled out of hole with tubing and packer, PU and run in hole with 7" HD packer and 204 joints of 3 1/2" P-110 tubing, set packer at 6405'. RU pump lines and pressure tested packer to 1000 psi. SWIFN

Plan to leave well shut in until the frac date on 6/25/12

6/18/2012 Waiting on frac crew

6/19/2012 Waiting on frac crew

6/20/2012 Waiting on frac crew

6/21/2012 Waiting on frac crew

6/22/2012 Waiting on frac crew

6/23/2012 Waiting on frac crew

6/24/2012 Waiting on frac crew

6/25/2012 Waiting on frac crew

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6/28/2012 RU Halliburton frac equipment to pump 73,500 pounds of 20/40 CarboProp proppant at a max concentration of 5 ppg with 35# Borate Crosslinked Gel (Hybor G) at 25 BPM. Screened out 21,000 lbs into job midway through 3 ppg stage with max treating pressure of 9300 psi and rate of 20 BPM.

Pre-Treatment Diagnostic:

Pumped 201 Bbls of linear gel for pre-treatment analysis ramping up rate in 4 BPM increments to 20 BPM. Max treating pressure 8700 psi. Shut-in and analyzed fall-off.

Surface ISIP/Frac gradient: 4,103 psi 1.041 psi/ft

Near-wellbore pressure drop: 3,602 psi

Perforation friction: 2,765 psi

Perforations open: 5 of 120

Treatment Pad:

Pumped 1467 Bbls of cross-linked pad at 18.5 BPM average rate and 8500 psi average pressure. Pad stages included 1000 gallon 0.5 ppg and 1.0 ppg proppant slugs spaced in between 20,000 gallon pad stages. Proppant slugs appeared to remove some near wellbore pressure drop by reducing treatment pressure.

Proppant Laden Stages:

Pumped initial 1.0 ppg stage away at 7200 psi and 20 BPM. Pressure declined from 7900 to 7200 psi by the end of the stage. Ramped up to 3 ppg as planned and treating pressure quickly flattened out from its decline and began to steadily increase to 9300 psi and job pressured out midway through 3 ppg stage. Was not able to displace/flush sand in wellbore. Left tubing full with 3 ppg proppant. Plan to wash out with coil tubing.

Results:

Cum Proppant Volume Pumped: 22,100 lbs

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Tubing/Casing Volume: 62.4 bbls to mid-perf

Proppant left in wellbore (3 ppg): 7900 lbs

Bulk proppant volume below bridge plug: 3050 lbs (see 7/2/2012)

Calculated Proppant Volume in Formation: 11,150 lbs

6/29/2012

Waiting on coiled tubing unit

6/30/2012

RU coiled tubing unit at 17:00 hrs, cleaned out sand from 1200' to the retrievable plug at 6585'. RD and released coiled tubing unit. SWIFN

7/1/2012

Plan to lay down 3 1/2" frac string / run in hole with 2 7/8" tubing / swab for rate and clean up.

Opened well, 0 psi tubing, 0 psi casing. Released packer and pulled out of hole laying down 3 1/2" frac string. Picked up and run in hole with retrieving head, 4 joints, packer and 2 7/8" tubing. Set packer at 6290', rigged up swab equipment and swabbed well as follows.

Swab runs - 10

Water cut - 98%

Average rate - 375 bfpd

Average fluid level - 3725

Total fluid recovered - 72 bbls

Perf intervals open -6560'-6580'

See 7-1 Swab report for details.

Plan to reverse circulate clean to RBP / pull out of hole with tubing and prepare to run ESP

7/2/2012

Opened well, 0 psi tubing, 0 psi casing. Released packer, RU pump lines and reverse circulated sand off of retrievable plug, RD pump lines. Released retrievable plug and was unable to move plug down hole, pulled out of hole laying down packer and plug. Run in hole with tubing and notched collar and tagged sand top at 6590', RU pump lines and reverse circulated sand out to PBTD at 6712'. Pulled out of hole with tubing and SWIFN.

Note: Apparently the sand channeled behind pipe between perf interval 6580' & 6590' then entered a lower perf interval. There were no signs of passage by the retrievable plug.

Plan to install ESP and turn well into production.

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7/4/2012 6.5 Hour production, 000 bopd, 080 bwpd, 45 Hz, BHP 1754

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Supervisor:

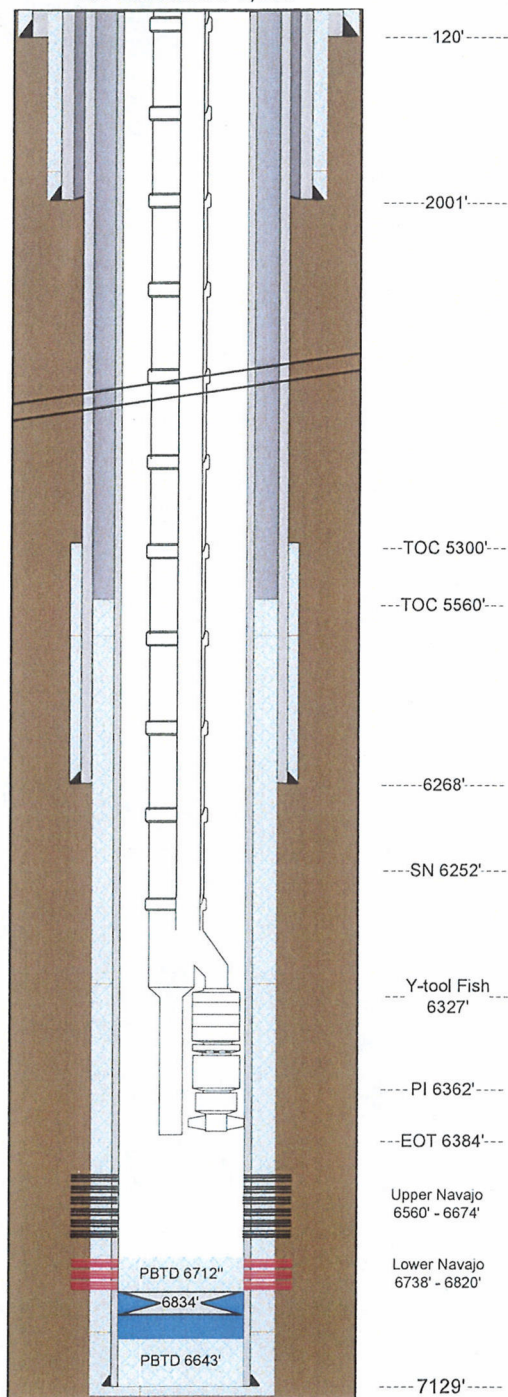
Tony E. Cook

Rig Operator:



Wolverine Federal 18-1
API # 43-041-30034
Covenant Field
Section 17, T23S, R1W
Sevier County, Utah

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 Total Depth (7130' MD): 188' FSL, 142' FEL, SE SE, 18-23S-1W

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 Depth Landed: 2001' MD
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Size/Wt/Grade: 9-5/8", 47#, HCP-110, LTC, 8rd
 Depth Landed: 6278' MD
 Cement Data: 230 sks 50:50 Poz (13.0 ppg, 1.71 cf/sk)

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Size/Wt/Grade: 7", 23#, HCP-110, LTC, 8rd
 Properties: 8720 psi burst, 6.241" drift, 6.366" ID, 0.0393 Bbl/ft Capacity
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 6621' - 6635' MD (6192'-6206 TVD), 14', 084 holes (10/22/07)
 6647' - 6653' MD (6218'-6224 TVD), 06', 036 holes (10/11/07)
 6670' - 6675' MD (6240'-6245 TVD), 05', 030 holes (10/11/07)
 6649' - 6653', 6671', & 6674' - Hydro Jet 012 holes (10/18/07)

Mid-Perf = 6618' MD (6188' TVD), 65' M (64.1' TV), 402 holes

6738' - 6757' MD (6297'-6316' TVD), 19', 076 holes (12/19/05) Plugged
 6773' - 6803' MD (6332'-6361' TVD), 30', 120 holes (12/19/05) Plugged
 6815' - 6820' MD (6373'-6378 TVD), 05', 020 holes (12/19/05) Plugged

Tubing (7/3/2012)

End of BHA 6384' WLM (5959' TVD)
 Centinel 6379' WLM (5954' TVD)
 Pump intake 6362' WLM (5937' TVD)
 Y-Tool Fish 6327' WLM (5903' TVD)
 Seating Nipple 6252' WLM (5380' TVD)

PBTD

(11/20/05) Tubing tagged cement top @ 7086' MD
 (10/30/06) Tagged fill @ 7069' MD
 (10/11/07) Wireline tag cement top @ 6712' MD-WLM



Wolverine Federal 18-1
API # 43-041-30034
Covenant Field
Section 17, T23S, R1W
Sevier County, Utah

Tubing Detail (6/27/08)

	17.00	KB
	-2.00	Landed above GL
204	6251.28	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	1.10	SN - 2-7/8", EUE, 8rd, 2.25" ID
2	63.14	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	6.04	Handling Sub - 2-7/8", 6.5#, L-80, EUE, 8rd
1	0.77	X-over - 2-3/8" x 2-7/8", EUE, 8rd
1	4.04	Y-Tool - Weatherford 2-3/8" EUE w/ blanking plug in place (1.053" drift)
1	10.02	Sub - 2-3/8", 4.7#, L-80, EUE, 8rd
1	0.77	X-over - 2-3/8" x 2-7/8", EUE, 8rd
1	24.27	Pump w/ Intake - Centrilift P-18 134 stage 400PLSXD
1	6.09	Seal - Model FSB3DB H6 FER SSCV SB/SB PFSA HL
1	10.67	Motor - Centrilift 54 HP 1020 V 35 A 450 MSP
1	4.10	Pressure sensor - Centinel 5000C
1	0.40	Centralizer - 2-3/8" EUE
	-14.00	Wireline correction
<hr/>		
	6383.69'	(5959' TVD)

Note: No check or drain plug in this well.

Tubing capacity = 0.00579 Bbl/ft, Burst = 10570 psi, Joint Yield = 144960 lbs

Directional Data:

<u>MD</u>	<u>TVD</u>	<u>Incl.</u>	<u>MD</u>	<u>TVD</u>	<u>Incl.</u>
500	500	3.0	4000	3797	26.4
1000	999	4.2	4500	4246	25.3
1500	1494	10.1	5000	4692	26.1
1750	1739	12.8	5500	5143	28.0
2000	1982	15.7	6000	5591	22.3
2250	2219	21.1	6500	6073	10.5
2500	2448	25.5	7000	6567	8.2
2750	2672	27.1	7130	6695	8.2 E
3000	2894	25.9			

Wellhead Information

- Tubing head flange is 7-1/16", 5M with a 2-7/8" EUE 8rd top connection.

Stimulation

12/21/05: 6738' - 6820' w/ 5500 gal 7.5% HCl. Attempted to isolate and treat individual zones.

Communicated between all three perforation intervals. BDP = 3200 psi, ISDP = 2350 psi

11/03/06: 6738' - 6820' w/ 4000 gal 15% HCl with 30 gpt Morflo, 1 gpt Lowsurf-300M, 2 gpt Pen-88, 1 gpt AS-9, 6 gpt HAI-404 inhibitor, 10gpt Fe-7A & 50gpt Fe-2 iron sequestering agents.

Pulse washed all perforations using coiled tubing. FTP = 2181 psi @ 1 BPM.

06/28/12: 6560' - 6580' fracture treated w/82,000 gallons of 35# Borate Hybor G and 22,100 lbs of 20/40 CarboProp Ceramic proppant. ATP = 7200 psi, ATR = 20 BPM. Screened out with estimated 11,000 lbs of proppant in formation. Wellbore was packed with proppant below RBP at 6585'. See workover activity report for additional details.

Notes

Surface Location: Latitude = 38° 47' 51.0945", Longitude = -111° 56' 05.0611"

(12/18/05): Cement top at 5542' on CBL-CCL-GR

(9/26/06): Available Logs: HRI, SDL/DSN, EMI, CBL, Halliburton Directional Log

TEC 7/11/12

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9			
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528			
1. TYPE OF WELL Oil Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: WOLVERINE			
2. NAME OF OPERATOR: WOLVERINE GAS & OIL COMPANY OF UTAH, LLC		8. WELL NAME and NUMBER: WOLVERINE FED 18-1			
3. ADDRESS OF OPERATOR: One Riverfront Plaza 55 Campau NW, Grand Rapids, MI, 49503		9. API NUMBER: 43041300340000			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0829 FSL 1928 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESW Section: 17 Township: 23.0S Range: 01.0W Meridian: S		9. FIELD and POOL or WILDCAT: COVENANT			
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA					
TYPE OF SUBMISSION <input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 4/1/2014 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	TYPE OF ACTION <table style="width: 100%;"> <tr> <td style="vertical-align: top;"> <input checked="" type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input checked="" type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </td> <td style="vertical-align: top;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER </td> <td style="vertical-align: top;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION </td> </tr> </table>		<input checked="" type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input checked="" type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION
<input checked="" type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input checked="" type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Wolverine Gas and Oil Co. of Utah, LLC intends to workover the Wolverine Federal 18-1 to acid stimulate existing Navajo perforations (from 6560'-6675') and recomplete additional Navajo pay intervals uphole, as follows: 6467'-74', 6476'-80', 6510'-17', and 6522'-29' (total 25' of new perforations). After similarly acidizing the new perforations, an ESP will be run and the well will be returned to production. A summary of the activities actually performed will be filed after well work is complete.					
NAME (PLEASE PRINT) Helene Bardolph		PHONE NUMBER 616 458-1150			
SIGNATURE N/A		TITLE Engineering Administrative Assistant			
DATE 2/26/2014		Accepted by the Utah Division of Oil, Gas and Mining Date: March 03, 2014 By: <i>Derek Quist</i>			

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007**SUNDRY NOTICES AND REPORTS ON WELLS****Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.****SUBMIT IN TRIPLICATE- Other instructions on reverse side.**1. Type of Well
☒ Oil Well ☐ ☐ Gas Well ☐ Other2. Name of Operator
Wolverine Gas and Oil Company of Utah, LLC3a. Address
55 Campau NW, Grand Rapids, Michigan 49503-26163b. Phone No. (include area code)
616-458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface: 829' FSL, 1928' FWL, Section 17, T23S, R1W, SLB&M

Bottom Hole: 248' FSL, 52' FEL, Section 18, T23S, R1W, SLB&M

5. Lease Serial No.

UTU-73528

6. If Indian, Allottee or Tribe Name

NA

7. If Unit or CA/Agreement, Name and/or No.

Wolverine Federal Unit

8. Well Name and No.

Wolverine Federal 18-1

9. API Well No.

43-041-30034

10. Field and Pool, or Exploratory Area

Covenant Field, Navajo

11. County or Parish, State

Sevier County, Utah

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>workover</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Wolverine completed a workover on the Wolverine Federal #18-1 on June 13, 2014. After an initial foamed acid treatment was aborted, existing perforations (6560'-6674') were treated with 2566 gals of 7-1/2% acid, foamed to 70Q and displaced with 70,000 scf of nitrogen. A maximum surface pressure of 4237 psi was recorded during the treatment, and the well was SI after after displacing the acid. Subsequent flowing/swabbing recovered the entire load volume.

An RBP was later set at 6550' and covered w/ 5' of sand. Additional Navajo pay was then perforated with TCP guns as follows: 6467'-6474', 6476'-6480', 6510'-6517', and 6522'-6529'. The new perforations (6467'-6529') could not be treated with foamed acid, so 2500 gals of 7-1/2% (liquid) acid was pumped, and displaced w/ 37 bbls of completion fluid. Acid was pumped at approximately 2 BPM, and with a maximum surface pressure of 1680 psi. After on overnight SI, the entire load volume was recovered through subsequent flowing/swabbing. The well was returned to production at an initial rate of 136 BO and 334 BW per day.

(See the attached WBD and Daily Reports for additional details.)

RECEIVED

JUL 03 2014

RECEIVED

JUN 30 2014

DIV. OF OIL, GAS & MINING

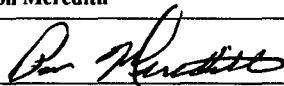
14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Ron Meredith

Richfield BLM Field Office

Title Sr. Production Engineer

Signature



Date

06/26/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

7/1/2014

Office

Richfield Field Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

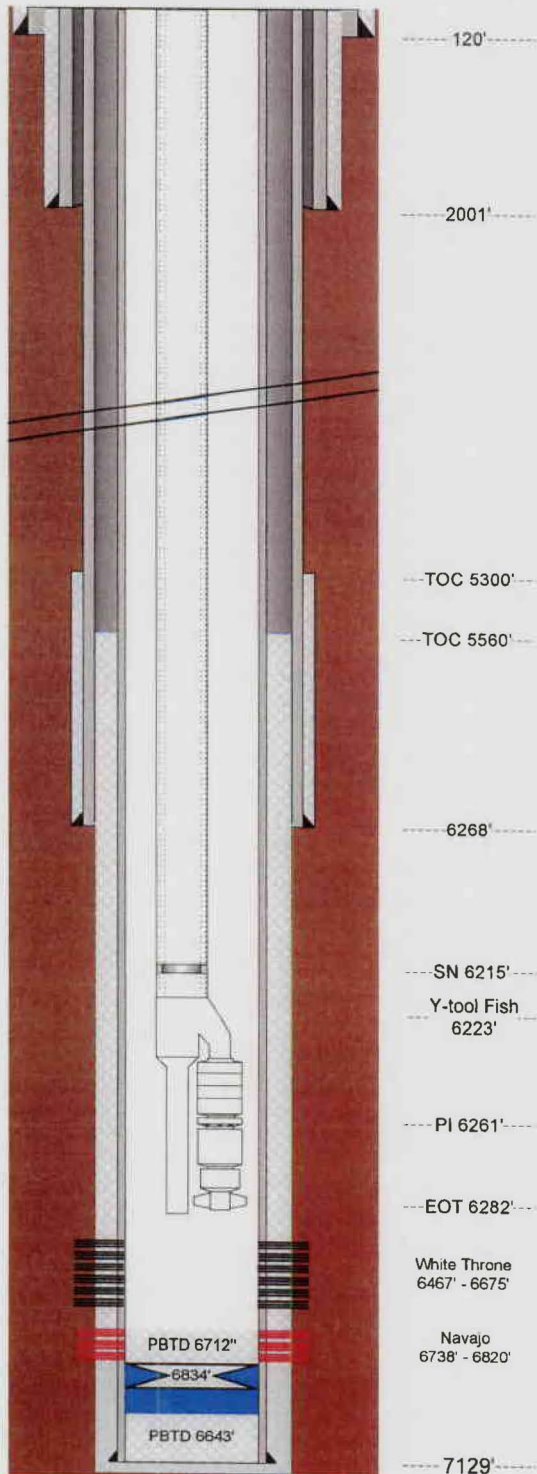
Survey # 145LA00515

Accepted For Record Purposes



Wolverine Federal 18-1
API # 43-041-30034
Covenant Field
Section 17, T23S, R1W
Sevier County, Utah

Ground Elevation: 5,839'
 KB Elevation: 5,856'



(Not to Scale)

Deviated Well

Surface: 829' FSL 1928' FWL, SE SW, 17-23S-1W
 Top of Pay (6457' MD): 248' FSL, 52' FEL, SE SE, 18-23S-1W
 Total Depth (7130' MD): 188' FSL, 142' FEL, SE SE, 18-23S-1W

Conductor Casing (09/05)

Size: 20", 0.25" wall
 Depth Landed: 120'
 Cement Data: Cemented to surface with 785 sks Class "G"

Surface Casing (9/12/05)

Size/Wt/Grade: 13-3/8", 61#, J-55, STC, 8rd
 Depth Landed: 2001' MD
 Cement Data: 490 sks CBM Light (10.5 ppg, 4.13 cf/sk), 380 sks Type V (15.6 ppg, 1.18 cf/sk), Top job w/ 189 sks Class "G"

Intermediate Casing (9/27/05)

Size/Wt/Grade: 9-5/8", 47#, HCP-110, LTC, 8rd
 Depth Landed: 6278' MD
 Cement Data: 230 sks 50:50 Poz (13.0 ppg, 1.71 cf/sk)

Production Casing (10/1/05)

Size/Wt/Grade: 7", 23#, HCP-110, LTC, 8rd
 Properties: 8720 psi burst, 6.241" drift, 6.366" ID, 0.0393 Bbl/ft Capacity
 Depth Landed: 7129' MD
 Cement Data: 190 sks 50:50 Poz (14.4 ppg, 1.23 cf/sk)

Navajo Perforations

6467' - 6474' MD (6041'-6048' TVD), 07', 035 holes (06/09/14)
 6476' - 6480' MD (6049'-6053' TVD), 04', 020 holes (06/09/14)
 6510' - 6517' MD (6083'-6090' TVD), 07', 035 holes (06/09/14)
 6522' - 6529' MD (6095'-6102' TVD), 07', 035 holes (06/09/14)
 6560' - 6580' MD (6132'-6152' TVD), 20', 120 holes (11/05/07)
 6590' - 6610' MD (6161'-6181' TVD), 20', 120 holes (10/29/07)
 6621' - 6635' MD (6192'-6206' TVD), 14', 084 holes (10/22/07)
 6647' - 6653' MD (6218'-6224' TVD), 06', 036 holes (10/11/07)
 6670' - 6675' MD (6240'-6245' TVD), 05', 030 holes (10/11/07)
 6649' - 6653' MD (6219'-6223' TVD), 04', 012 holes (10/18/07) Hydro-jet
 6671' - 6674' MD (6241'-6244' TVD), 03', 012 holes (10/18/07) Hydro-jet

Mid-Perf = 6571' MD (6142' TVD), 90' M (64.1' TV), 527 holes

6738' - 6757' MD (6297'-6316' TVD), 19', 076 holes (12/19/05) Plugged
 6773' - 6803' MD (6332'-6361' TVD), 30', 120 holes (12/19/05) Plugged
 6815' - 6820' MD (6373'-6378' TVD), 05', 020 holes (12/19/05) Plugged



Wolverine Federal 18-1
API # 43-041-30034
Covenant Field
Section 17, T23S, R1W
Sevier County, Utah

Tubing (6/13/2014)

End of BHA 6282' WLM (5859' TVD)
 Centinel 6278' WLM (6855' TVD)
 Pump intake 6261' WLM (5839' TVD)
 Y-Tool Fish 6223' WLM (5802' TVD)
 Seating Nipple 6215' WLM (5794' TVD)

PBTD

(11/20/05) Tubing tagged cement top @ 7086' MD
 (10/30/06) Tagged fill @ 7069' MD
 (10/11/07) Wireline tag cement top @ 6712' MD-WLM
 (06/02/14) Tubing tagged PBTD @ 6712' MD-WLM

Tubing Detail (6/27/08)

	17.00	KB
	-3.00	Landed above GL
191	6141.84	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	4.10	Marker Sub - 2-7/8", 6.5#, L-80, EUE, 8rd
2	64.98	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	1.10	SN - 2-7/8", EUE, 8rd, 2.25" ID
1	6.04	Handling Sub - 2-7/8", 6.5#, L-80, EUE, 8rd
1	0.77	X-over - 2-3/8" x 2-7/8", EUE, 8rd
1	2.55	Y-Tool - Weatherford 2 x 1-1/2"
1	10.02	Sub - 2-3/8", 4.7#, L-80, EUE, 8rd
1	0.77	X-over - 2-3/8" x 2-7/8", EUE, 8rd
1	24.95	Pump
1	6.10	Seal
1	10.68	Motor
1	4.10	Centinel
1	0.40	Centralizer - 2-3/8" EUE
	-10.00	Wireline correction
<hr/>		
EOT	6282.40'	(6282' MD, 5859' TVD)

Directional Data:

MD	TVD	Incl.	MD	TVD	Incl.
500	500	3.0	4000	3797	26.4
1000	999	4.2	4500	4246	25.3
1500	1494	10.1	5000	4692	26.1
1750	1739	12.8	5500	5143	28.0
2000	1982	15.7	6000	5591	22.3
2250	2219	21.1	6500	6073	10.5
2500	2448	25.5	7000	6567	8.2
2750	2672	27.1	7130	6695	8.2 E
3000	2894	25.9			



Covenant Field
Federal 18-1
API# 43-041-30034

SHL SE/SW Sec 17, T23S, R1W
BHL SE/SE Sec 18, T23S, R1W
Sevier County, Utah

6/2/2014

MIRUSU, ND wellhead, NU BOP's. Pulled out of the hole laying down tubing and ESP equipment. Picked up and tripped in the hole with 6-1/8" bit, 7" casing scraper and 216 joints of 2-7/8" P-110 tubing to PBTD. Rigged up pump lines and reverse circulated with 250 bbls of completion fluid. RD pump lines, pulled out of the hole to 6500' and shut the well in for the night.

6/3/2014

Opened well, 0 psi. PU & TIH with 7" HD packer and 210 joints of 2-7/8" P-110 tubing. Set packer at 6535', RU Halliburton acid equipment and pumped foamed acid as follows:

1. Pump 500 gallons acid at, while taking returns from the 2 7/8" x 7" annulus.
2. Closed packer by-pass
3. Pumped 1204 gallons of 60Q foamed acid at 0.4 BPM, Max WHP of 3,550 psi.
4. SD due to hi pressure
5. Pumped 446 gallons of 60Q foamed acid at 0.4 BPM, Max WHP of 3,550 psi.
6. Casing started to pressure up (2150 gallons of acid pumped)
7. Pumped 850 gallons of 65Q foamed acid at 0.4 BPM, Max WHP of 3,800 psi.
8. SD due to pressure and gas returns up the casing.

Note: The foamed acid job was not pumped to completion due to a tubing leak.

RD Halliburton acid equipment, RU flowback equipment and opened the well to a frac tank to bleed off pressure. SWIFN

6/4/2014

The well did not flow any fluid back to the frac tank overnight. Rigged up swab equipment and RIH to 1800' and stacked out on foreign debris in the tubing. Worked the object down to 2300' and was unable to move any further. Rigged down swab equipment, released packer and reverse circulated with 50 bbls of completion fluid. The well flowed an additional 15 bbls of fluid to the frac tank after shutting down. Rigged down pump lines and rigged up swab equipment. Run in the hole and tagged debris at 800' and was unable to work through it. Rigged down swab equipment, re-set the packer, rigged up pump lines and pressured the annulus to 3000 psi, the pressure bled off at a rate of 100 psi per minute. Bled pressure off the casing and rigged down pump lines. Released the packer with the intentions of pulling out of the hole with the tubing and packer. After releasing the packer and pulling up ~60' the tubing string weight increased 15,000 lbs. then returned to normal for the remainder of the pull. Once all of the tubing was pulled from the well we found that the packer and 4 jts of tubing were left at the bottom of the well. SWIFN

Note: The tubing to annulus communication that was encountered during the acid treatment on 6/3 was most likely from area of the collar part, located 4 joints above the packer.

6/5/2014

Opened well, 0 psi. Tripped in the hole with 210 joints of P-110 tubing to the fish at 6533', made several attempts to screw into the fish with no success. Pulled out of the hole with tubing, Tripped in the hole with 210 joints and an overshot to catch the collar on the fish. Made several unsuccessful attempts to catch fish. Pulled out of the hole with tubing and fishing equipment. SWIFN

Note: The overshot shows that we have a pin looking up instead of a collar

6/6/2014

Picked up and tripped in the hole with 210 joints of 2-7/8" tubing and an overshot set up to fish the tubing pin. Latched onto fish and pulled out of the hole with tubing and packer. Picked up and tripped in the hole with RH, 4' sub, HD packer, SN and 209 joints of 2-7/8" P-110 tubing. Set packer at 6504', RU pump lines and pressure tested the packer to 2000 psi. Bled pressure off of the casing and rigged down pump lines. RU Halliburton acid equipment and pumped foamed acid as follows:

1. Loaded tubing with 3.2 bbls acid
2. Pumped 2566 gallons of 70Q foamed acid at 0.4 BPM, Max WHP of 4,237 psi.
3. Flushed with 70,000 scf N2
4. ISIP 4,046

Note: The tubing leak that resulted in a fishing job was due to a broken P-110 tubing collar. Further review will be needed to determine the cause.

Shut well in, RD Halliburton acid equipment, RU Flow back lines and opened the well to a frac tank for the night.

6/7/2014

Well flowed back 21 bbls of fluid overnight. RU swab equipment and swabbed well as follows:

Swab runs - 33

Water cut - 85%

Total fluid recovered - 303 bbls

Perf intervals open 6560'-6674'

RD swab equipment and SWIFN

6/8/2014

Opened well, 250 psi casing, 700 psi casing. RU swab equipment and swabbed well as follows:

Swab runs - 5

Water cut - 95%

Average rate - N/A

Total fluid recovered - 55 bbls

Perf intervals open 6560'-6674'

RD swab equipment, released packer and pulled out of the hole laying down the HD packer. Rigged up wireline unit and set a bridge plug at 6550', RD wireline unit. RIH with one stand and dumped 5' of sand on top of the RBP, pulled out of the hole with stand. Picked up and tripped in the hole with perforating guns, 4-joints 2-7/8" P-110 tubing, packer, 2-joints 2-7/8" tubing, RA sub 207-joints 2-7/8" P-110 tubing, 6' x 2-7/8" P-110 sub and a 10' x 2-7/8" P-110 sub. Rigged up wireline unit with GR/CCL to correlate the RA nipple to the correct depth. Set packer at 6330' to perf 6467' - 6529'. SWIFN

Note: Perforating guns were set on depth using Halliburton SDL-DSN-GR dated 9/30/05

6/9/2014

RU Halliburton acid and nitrogen equipment, pressured the tubing with nitrogen to 6138 psi to fire the tubing conveyed perforating guns. After the guns fired the formation was too tight to continue with the foamed acid stimulation. Shut down and released the nitrogen equipment, released the packer and spotted 37 bbls of acid to the perforations. Set packer and pumped and additional 21.8 bbls of acid and displaced the with 37 bbls of completion fluid. RD and released Halliburton acid equipment. Released packer and tripped out of the hole laying down the tubing conveyed perforating equipment. SWIFN

Note: 2500 gallons of Fe acid was pumped into the new perf sets 6467'-6529'. The acid was pumped at ~2bpm with a max pressure of 1680 psi. No frac balls were used during this stimulation.

6/10/2014

Opened well, 150 psi. Tripped in the hole with RH, 4' sub, 7" HD packer, SN, 2-joints, 4' marker sub and 205 joints of tubing. Set packer at 6444', RU swab equipment and swabbed well as follows:

Swab runs - 18

Water cut - 95%

Perf intervals open 6467'-6529'

6/11/2014

Opened well, 80 psi. Released packer, RU pump lines and reverse circulated sand off the top of the bridge plug. RD pump lines, latched onto bridge plug and pulled out of the hole laying down plug and packer. SWIFN.

6/12/2014

Opened well, 45 psi. Picked up and tripped in the hole with 193 joints of inspected L-80 tubing then pulled out of the hole standing back tubing in preparation to run ESP equipment.

6/13/2014 Opened well, 30 psi. Picked up and tripped in the hole with 5.5" centralizer, Centinel, motor, seal, pump, 2 3/8" x 2 7/8" XO, 2 3/8" x 10' L-80 sub, 2" x 1 1/2" Y-Tool, 2 3/8" x 2 7/8" XO, 2 7/8" x 6' sub, cup type SN, 2-joints 2 7/8" L-80 tubing, 2 7/8" x 4' sub, 160 joints 2 7/8" L-80 yellow band tubing and 31 joints 2 7/8" L-80 blue band tubing. ND BOP NU wellhead. RDMOSU and turned well into production.

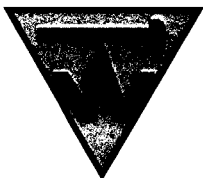
6/13/2014 09 hr. production. 010 Oil, 170 Water, 1754 BHP Centinel 1743 Actual

6/14/2014 24 hr. production. 136 Oil, 334 Water, 1723 BHP Centinel 1713 Actual

6/15/2014 24 hr. production. 157 Oil, 232 Water, 1612 BHP Centinel 1604 Actual

Supervisor: Tony E. Cook

Rig Operator:



**WOLVERINE GAS AND OIL COMPANY
OF UTAH, LLC**

Energy Exploration in Partnership with the Environment

June 26, 2014

Mr. Stan Anderson
Fluid Minerals Group, BLM
Richfield Field Office
150 East 900 North
Richfield, UT 84701

RECEIVED
JUN 30 2014
DIV. OF OIL, GAS & MINING

Mr. Brad Hill
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84116

Re: Subsequent Report Sundry for Wolverine Federal 18-1 (API No. 43-041-30034)

Gentlemen:

17 235 1W

Please find enclosed the required Sundry Notice for a recently completed workover at the above-captioned well, with appropriate additional copies. The subject well is operated by Wolverine Gas & Oil Company of Utah, LLC and was recently worked over, in an attempt to increase oil production. Feel free to contact me if you have questions or concerns about either the work performed or the information in this post-work filing. I can be reached in my office at 616-929-1932 weekdays, from 7:30 am to 4:30 PM (EST).

Sincerely,

Ron Meredith,
Sr. Production Engineer
Wolverine Gas & Oil Corporation

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007**SUNDRY NOTICES AND REPORTS ON WELLS****Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.****SUBMIT IN TRIPLICATE- Other instructions on reverse side.**1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator **Wolverine Gas and Oil Company of Utah, LLC**3a. Address
55 Campau NW, Grand Rapids, Michigan 49503-26163b. Phone No. (include area code)
616-458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface: **829' FSL, 1928' FWL, Section 17, T23S, R1W, SLB&M**
Bottom Hole: **248' FSL, 52' FEL, Section 18, T23S, R1W, SLB&M**

5. Lease Serial No.

UTU-73528

6. If Indian, Allottee or Tribe Name

NA

7. If Unit or CA/Agreement, Name and/or No.

Wolverine Federal Unit

8. Well Name and No.

Wolverine Federal 18-1

9. API Well No.

43-041-30034

10. Field and Pool, or Exploratory Area

Covenant Field, Navajo

11. County or Parish, State

Sevier County, Utah**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other workover
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Wolverine completed a workover on the Wolverine Federal #18-1 on June 13, 2014. After an initial foamed acid treatment was aborted, existing perforations (6560'-6674') were treated with 2566 gals of 7-1/2% acid, foamed to 70Q and displaced with 70,000 scf of nitrogen. A maximum surface pressure of 4237 psi was recorded during the treatment, and the well was SI after after displacing the acid. Subsequent flowing/swabbing recovered the entire load volume.

An RBP was later set at 6550' and covered w/ 5' of sand. Additional Navajo pay was then perforated with TCP guns as follows: 6467'-6474', 6476'-6480', 6510'-6517', and 6522'-6529'. The new perforations (6467'-6529') could not be treated with foamed acid, so 2500 gals of 7-1/2% (liquid) acid was pumped, and displaced w/ 37 bbls of completion fluid. Acid was pumped at approximately 2 BPM, and with a maximum surface pressure of 1680 psi. After on overnight SI, the entire load volume was recovered through subsequent flowing/swabbing. The well was returned to production at an initial rate of 136 BO and 334 BW per day.

(See the attached WBD and Daily Reports for additional details.)

Accepted by the
Utah Division of
Oil, Gas and Mining
For Record Only

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)**Ron Meredith**Title **Sr. Production Engineer**

Signature



Date

06/26/2014**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by _____

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

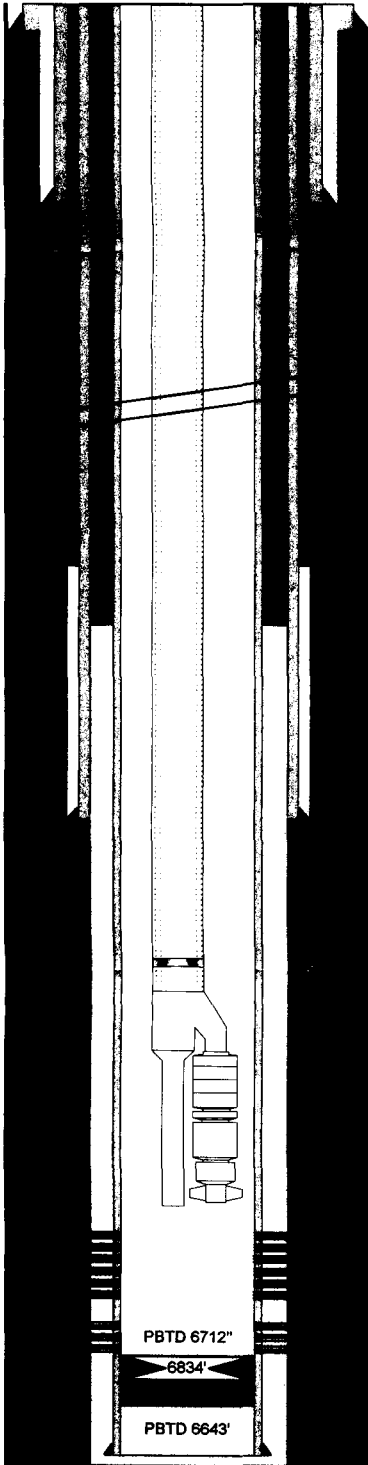
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)



Wolverine Federal 18-1
API # 43-041-30034
Covenant Field
Section 17, T23S, R1W
Sevier County, Utah

Ground Elevation: 5,839'
 KB Elevation: 5,856'



(Not to Scale)

Deviated Well

Surface: 829' FSL 1928' FWL, SE SW, 17-23S-1W
 Top of Pay (6457' MD): 248' FSL, 52' FEL, SE SE, 18-23S-1W
 Total Depth (7130' MD): 188' FSL, 142' FEL, SE SE, 18-23S-1W

Conductor Casing (09/05)

Size: 20", 0.25" wall
 Depth Landed: 120'
 Cement Data: Cemented to surface with 785 sks Class "G"

Surface Casing (9/12/05)

Size/Wt/Grade: 13-3/8", 61#, J-55, STC, 8rd
 Depth Landed: 2001' MD
 Cement Data: 490 sks CBM Light (10.5 ppg, 4.13 cf/sk), 380 sks Type V (15.6 ppg, 1.18 cf/sk), Top job w/ 189 sks Class "G"

Intermediate Casing (9/27/05)

Size/Wt/Grade: 9-5/8", 47#, HCP-110, LTC, 8rd
 Depth Landed: 6278' MD
 Cement Data: 230 sks 50:50 Poz (13.0 ppg, 1.71 cf/sk)

Production Casing (10/1/05)

Size/Wt/Grade: 7", 23#, HCP-110, LTC, 8rd
 Properties: 8720 psi burst, 6.241" drift, 6.366" ID, 0.0393 Bbl/ft Capacity
 Depth Landed: 7129' MD
 Cement Data: 190 sks 50:50 Poz (14.4 ppg, 1.23 cf/sk)

Navajo Perforations

6467' - 6474' MD (6041'-6048' TVD), 07', 035 holes (06/09/14)
 6476' - 6480' MD (6049'-6053' TVD), 04', 020 holes (06/09/14)
 6510' - 6517' MD (6083'-6090' TVD), 07', 035 holes (06/09/14)
 6522' - 6529' MD (6095'-6102' TVD), 07', 035 holes (06/09/14)
 6560' - 6580' MD (6132'-6152' TVD), 20', 120 holes (11/05/07)
 6590' - 6610' MD (6161'-6181' TVD), 20', 120 holes (10/29/07)
 6621' - 6635' MD (6192'-6206' TVD), 14', 084 holes (10/22/07)
 6647' - 6653' MD (6218'-6224' TVD), 06', 036 holes (10/11/07)
 6670' - 6675' MD (6240'-6245' TVD), 05', 030 holes (10/11/07)
 6649' - 6653' MD (6219'-6223' TVD), 04', 012 holes (10/18/07) Hydro-jet
 6671' - 6674' MD (6241'-6244' TVD), 03', 012 holes (10/18/07) Hydro-jet

Mid-Perf = 6571' MD (6142' TVD), 90' M (64.1' TV), 527 holes

6738' - 6757' MD (6297'-6316' TVD), 19', 076 holes (12/19/05) Plugged
 6773' - 6803' MD (6332'-6361' TVD), 30', 120 holes (12/19/05) Plugged
 6815' - 6820' MD (6373'-6378' TVD), 05', 020 holes (12/19/05) Plugged



Covenant Field
Federal 18-1
API# 43-041-30034

SHL SE/SW Sec 17, T23S, R1W
BHL SE/SE Sec 18, T23S, R1W
Sevier County, Utah

- 6/2/2014 MIRUSU, ND wellhead, NU BOP's. Pulled out of the hole laying down tubing and ESP equipment. Picked up and tripped in the hole with 6-1/8" bit, 7" casing scraper and 216 joints of 2-7/8" P-110 tubing to PBTD. Rigged up pump lines and reverse circulated with 250 bbls of completion fluid. RD pump lines, pulled out of the hole to 6500' and shut the well in for the night.
- 6/3/2014 Opened well, 0 psi. PU & TIH with 7" HD packer and 210 joints of 2-7/8" P-110 tubing. Set packer at 6535', RU Halliburton acid equipment and pumped foamed acid as follows:
1. Pump 500 gallons acid at, while taking returns from the 2-7/8" x 7" annulus.
 2. Closed packer by-pass
 3. Pumped 1204 gallons of 60Q foamed acid at 0.4 BPM, Max WHP of 3,550 psi.
 4. SD due to hi pressure
 5. Pumped 446 gallons of 60Q foamed acid at 0.4 BPM, Max WHP of 3,550 psi.
 6. Casing started to pressure up (2150 gallons of acid pumped)
 7. Pumped 850 gallons of 65Q foamed acid at 0.4 BPM, Max WHP of 3,800 psi.
 8. SD due to pressure and gas returns up the casing.
- Note: The foamed acid job was not pumped to completion due to a tubing leak.
- RD Halliburton acid equipment, RU flowback equipment and opened the well to a frac tank to bleed off pressure. SWIFN
- 6/4/2014 The well did not flow any fluid back to the frac tank overnight. Rigged up swab equipment and RIH to 1800' and stacked out on foreign debris in the tubing. Worked the object down to 2300' and was unable to move any further. Rigged down swab equipment, released packer and reverse circulated with 50 bbls of completion fluid. The well flowed an additional 15 bbls of fluid to the frac tank after shutting down. Rigged down pump lines and rigged up swab equipment. Run in the hole and tagged debris at 800' and was unable to work through it. Rigged down swab equipment, re-set the packer, rigged up pump lines and pressured the annulus to 3000 psi, the pressure bled off at a rate of 100 psi per minute. Bled pressure off the casing and rigged down pump lines. Released the packer with the intentions of pulling out of the hole with the tubing and packer. After releasing the packer and pulling up ~60' the tubing string weight increased 15,000 lbs. then returned to normal for the remainder of the pull. Once all of the tubing was pulled from the well we found that the packer and 4 jts of tubing were left at the bottom of the well. SWIFN
- Note: The tubing to annulus communication that was encountered during the acid treatment on 6/3 was most likely from area of the collar part, located 4 joints above the packer.
- 6/5/2014 Opened well, 0 psi. Tripped in the hole with 210 joints of P-110 tubing to the fish at 6533', made several attempts to screw into the fish with no success. Pulled out of the hole with tubing, Tripped in the hole with 210 joints and an overshot to catch the collar on the fish. Made several unsuccessful attempts to catch fish. Pulled out of the hole with tubing and fishing equipment. SWIFN
- Note: The overshot shows that we have a pin looking up instead of a collar
- 6/6/2014 Picked up and tripped in the hole with 210 joints of 2-7/8" tubing and an overshot set up to fish the tubing pin. Latched onto fish and pulled out of the hole with tubing and packer. Picked up and tripped in the hole with RH, 4' sub, HD packer, SN and 209 joints of 2-7/8" P-110 tubing. Set packer at 6504', RU pump lines and pressure tested the packer to 2000 psi. Bled pressure off of the casing and rigged down pump lines. RU Halliburton acid equipment and pumped foamed acid as follows:

1. Loaded tubing with 3.2 bbls acid

3. Pumped 2566 gallons of 70Q foamed acid at 0.4 BPM, Max WHP of 4,237 psi.

3. Flushed with 70,000 scf N2

4. ISIP 4,046

Note: The tubing leak that resulted in a fishing job was due to a broken P-110 tubing collar. Further review will be needed to determine the cause.

Shut well in, RD Halliburton acid equipment, RU Flow back lines and opened the well to a frac tank for the night.

6/7/2014

Well flowed back 21 bbls of fluid overnight. RU swab equipment and swabbed well as follows:

Swab runs - 33

Water cut - 85%

Total fluid recovered - 303 bbls

Perf intervals open 6560'-6674'

RD swab equipment and SWIFN

6/8/2014

Opened well, 250 psi casing, 700 psi casing. RU swab equipment and swabbed well as follows:

Swab runs - 5

Water cut - 95%

Average rate - N/A

Total fluid recovered - 55 bbls

Perf intervals open 6560'-6674'

RD swab equipment, released packer and pulled out of the hole laying down the HD packer. Rigged up wireline unit and set a bridge plug at 6550', RD wireline unit. RIH with one stand and dumped 5' of sand on top of the RBP, pulled out of the hole with stand. Picked up and tripped in the hole with perforating guns, 4-joints 2-7/8" P-110 tubing, packer, 2-joints 2-7/8" tubing, RA sub 207-joints 2-7/8" P-110 tubing, 6' x 2-7/8" P-110 sub and a 10' x 2-7/8" P-110 sub. Rigged up wireline unit with GR/CCL to correlate the RA nipple to the correct depth. Set packer at 6330' to perf 6467' - 6529'. SWIFN

Note: Perforating guns were set on depth using Halliburton SDL-DSN-GR dated 9/30/05

6/9/2014

RU Halliburton acid and nitrogen equipment, pressured the tubing with nitrogen to 6138 psi to fire the tubing conveyed perforating guns. After the guns fired the formation was too tight to continue with the foamed acid stimulation. Shut down and released the nitrogen equipment, released the packer and spotted 37 bbls of acid to the perforations. Set packer and pumped and additional 21.8 bbls of acid and displaced the with 37 bbls of completion fluid. RD and released Halliburton acid equipment. Released packer and tripped out of the hole laying down the tubing conveyed perforating equipment. SWIFN

Note: 2500 gallons of Fe acid was pumped into the new perf sets 6467'-6529'. The acid was pumped at ~2bpm with a max pressure of 1680 psi. No frac balls were used during this stimulation.

6/10/2014

Opened well, 150 psi. Tripped in the hole with RH, 4' sub, 7" HD packer, SN, 2-joints, 4' marker sub and 205 joints of tubing. Set packer at 6444', RU swab equipment and swabbed well as follows:

Swab runs - 18

Water cut - 95%

Perf intervals open 6467'-6529'

6/11/2014

Opened well, 80 psi. Released packer, RU pump lines and reverse circulated sand off the top of the bridge plug. RD pump lines, latched onto bridge plug and pulled out of the hole laying down plug and packer. SWIFN.

6/12/2014

Opened well, 45 psi. Picked up and tripped in the hole with 193 joints of inspected L-80 tubing then pulled out of the hole standing back tubing in preparation to run ESP equipment.

<u>6/13/2014</u>	Opened well, 30 psi. Picked up and tripped in the hole with 5.5" centralizer, Centinel, motor, seal, pump, 2 3/8" x 2 7/8" XO, 2 3/8" x 10' L-80 sub, 2" x 1 1/2" Y-Tool, 2 3/8" x 2 7/8" XO, 2 7/8" x 6' sub, cup type SN, 2-joints 2 7/8" L-80 tubing, 2 7/8" x 4' sub, 160 joints 2 7/8" L-80 yellow band tubing and 31 joints 2 7/8" L-80 blue band tubing. ND BOP NU wellhead. RDMOSU and turned well into production.
<u>6/13/2014</u>	09 hr. production. 010 Oil, 170 Water, 1754 BHP Centinel 1743 Actual
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<u>6/15/2014</u>	24 hr. production. 157 Oil, 232 Water, 1612 BHP Centinel 1604 Actual

Supervisor: Tony E. Cook

Rig Operator: